Oil, Paint and Drug Reporter

The Market Authority Since 1871
Chemicals-Dyestuffs-Drugs-Paints-Oils-Fertilizers

September 10, 1928: Vol. 114: No. 11 — 12 Gold Street, New York, N. Y.

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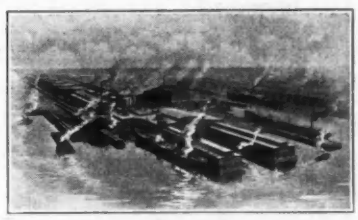

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Oil, Paint and Drug Reporter

The Market Authority Since 1871
Chemicals-Dyestuffs-Drugs-Paints-Oils-Fertilizers

Founded October 18, 1871, by William O. Allison

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Latest Market Developments

Manila Copra Market

WASHINGTON, Sept. 7, 1928.

The copra market continues weak with arrivals heavy, according to a cable received September 6 from the American trade commissioner at Manila. All mills are operating. Provincial equivalent for resecado delivered at Manila 11½ pesos per picul; Hondagua, 11 pesos; Cebu, 11⅞ pesos. Arrivals of copra at Manila during August were 561,000 sacks against 336,000 last year.

Wood Rosin Higher

Wood rosin was advanced by one producer at the week end to $7 per unit, f.o.b. southern shipping points, effective today.

Foreign Barium Chloride Scarce

There was very little foreign barium chloride available in any quarter of the market at the close of last week. In fact the foreign was only being offered for future shipment.

Miscellaneous Oils Firm

Miscellaneous oils, fats, and greases were generally firm Saturday, the tendency of prices in some instances still being upward though previous quotations remained in effect as a rule. In some quarters, 9c. per pound was quoted for crude corn oil in tanks at mills, an advance of ¼c. Tallow offerings were light, and the market had a firmer note.

London Closing Cable

Prices at the close of the London market were as follows.

	This week. s.	d.	Last week. s.	d.
Carnauba wax	125	0	120	0

Tartar Emetic Up

Prices for tartar emetic were advanced 2c. Saturday morning, making the market as follows:—Technical, 29¼c. to 29½c. per pound; USP, 34½c. to 36c.

Shellac Steady

Shellac prices were steady Saturday morning. London came in at 220s. per hundredweight for October and 210s. for December.

Pennsylvania Wax Higher

OIL CITY, Sept. 8, 1928.

Pennsylvania refiners today advanced parafin wax quotations ½c. per pound on all melting points.

London Ammonia Sulphate Up

LONDON, Sept. 8, 1928.

Export sulphate, neutral quality, has been advanced 2s. per ton to £9 15s. 6d., in double bags, prompt shipment, f.o.b. U.K. ports.

Cottonseed Oil Closing Prices

Saturday prices on cottonseed oil were irregular, closing slightly higher on covering of shorts.

Closing prices were:—

	September 8.	August 31.
September	10.35@10.75	9.46@ 9.59
October	10.37@10.40	9.66@—
November	10.30@10.40	9.67@ 9.73
December	10.28@—	9.73@—
January	10.34@10.40	9.80@—
February	10.30@10.45	9.80@ 9.93
March	10.45@—	9.96@ 9.97
April	10.40@10.70	9.99@10.10
Spot	10.35@10.75	9.45@ 9.80
Crude	8.50@ 8.75	Nom.@—

Sales, 6,400 barrels; week's total, 81,500 barrels; since January 1, 3,678,500 barrels.

The Wisconsin Petroleum Association has arranged State group meetings of oil men as follows:—September 12, Wausau Hotel, Wausau; October 17, Schroeder Hotel, Milwaukee; December 12, Schroeder Hotel, Milwaukee; January 16, 1929, Park Hotel, Madison; February 13, Park Hotel, Madison; March 13, Schroeder Hotel, Milwaukee; April 10, Schroeder Hotel, Milwaukee; May 15, Beaumont Hotel, Green Bay.

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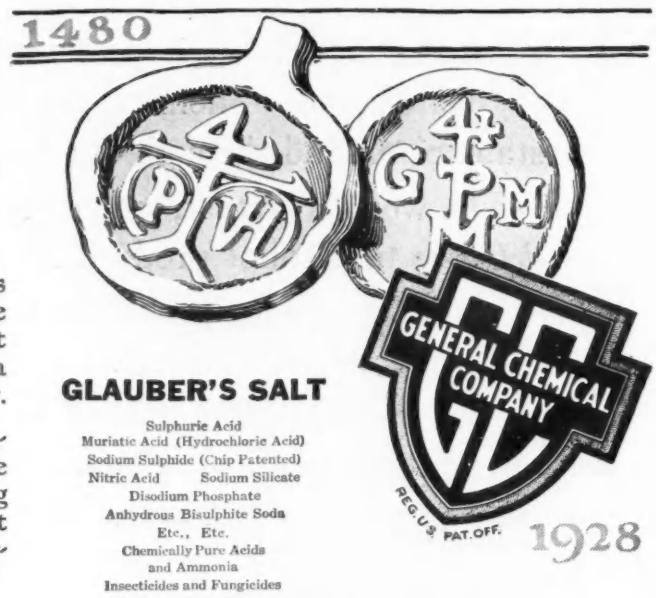

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Nitric Acid Sodium Silicate
Disodium Phosphate
Anhydrous Bisulphite Soda
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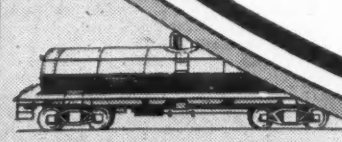
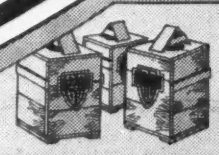
THE NICHOLS CHEMICAL CO., LTD., MONTREAL





IMPORTS, EXPORTS, CHARTERS

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Imports at New York

ACID, FORMIC—80 cbys, 13,347 lbs, Roessler & Hasslacher Chem Co, Bellepline, Rotterdam
72 cbys, 13,151 lbs, American Cyanimid Co, Brazil, Hamburg
SLUDGE—50 bbls, 25,014 lbs, Schlieman Co, Inc, Orinoco, Hamburg
TANNIC—10 cks, 4,373 lbs, E M Sargeant Co, Albert Ballin, Hamburg
TARTARIC—5 kgs, 500 lbs, E M Javitz & Son, Tuscania, London
AGAR AGAR—10 bls, 2,000 lbs, Shima Trading Co, Takaeka, Kobe
ALBUMEN, EGG — 56 cs, 11,200 lbs, Sino Java Handel, Inc, President Adams, Shanghai
ALCOHOL, DENATURED—35 dms, C Esteva, San Lorenzo, San Juan
76 dms, Virgin Island Prod Corpn, Dominica, St Croix
ALMOND MEAL—55 cs, Jaburg Bros, American Trader, London
20 pkgs, Fritzsche Bros, Providence, Marseilles
AMMONIA BICARBONATE — 60 cks, 37,083 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
CARBONATE LUMP — 20 cks, 12,100 lbs, Roessler & Hasslacher Chem Co, Bellepline, Rotterdam
NITRATE—721 cks, R W Greef & Co, Oscar II, Oslo
SULPHATE—454 bgs, 99,880 lbs, Synthetic Nitrogen Prod Co, Orinoco, Hamburg
SULPHATE NITRATE — 17,238 bgs, Synthetic Nitrogen Prod Co, Brazil, Hamburg
AMMONIAC SAL—120 cks, 75,240 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
136 cks, 117,466 lbs, Hans Hinrichs Chem Corpn, Bellepline, Rotterdam
ANTIMONY—5 cs, McLaughlin, Gormley & King, Orinoco, Hamburg
METAL — 95 cs, Stanley Fullwood, Canto, Tampico
OXIDE—12 cs, Charles Gitlan & Co, Patagonier, Antwerp
REGULUS—250 cs, 56,000 lbs, Wah Chang Trading Corpn, President Adams, Shanghai
ARCHIL LIQUID—10 cks, A De Ronde & Co, Minnewaska, London
ARSENIC, METALLIC — 70 dms, 17,248 lbs, Pfaltz & Bauer, Brazil, Hamburg
ARTISTS' MATERIAL—4 cs, Winsor & Newton, Minnewaska, London
ASBESTOS—1,257 bgs, Standard Bank South Africa, Orinoco, Hamburg
BALSAM COPAIBA—58 cs, H A Astlett & Co, Ardan, Manaos
86 cs, Bank of London-South America, Ardan, Para
BARIUM CARBONATE—280 bgs, Innis, Speiden & Co, Transylvania, Glasgow
NITRATE — 29 cks, Charles Hardy, Inc, Sierra Cordova, Bremen
BARK, SOAP — 40 bgs, 4,400 lbs, King & Howe, Brazil, Hamburg
28 bgs, 4,463 lbs, King & Howe, Albert Ballin, Hamburg
BARYTES—1,000,000 kilos, 2,200,000 lbs, Ore & Chem Corpn, Rotterdam, Rotterdam
1,000,000 kilos, 2,200,000 lbs, Ore & Chem Corpn, Blijdendijk, Rotterdam
BAY RUM—20 bbls, Ehrman, Strauss Co, Dominica, St Thomas
BEANS, CASTOR—26 bgs, W & A Lesman, Calypso, Port de Paix
COCOA—747 bgs, Frame & Co, Celtic, Liverpool
151 bgs, Schall Pavenstedt & Co, Huron, Sanchez
1,080 bgs, Curacao Trading Co, Huron, Sanchez
123 bgs, Schall Pavenstedt & Co, Huron, Pt Plata
386 bgs, Yglesias & Co, Huron, Pt Plata
275 bgs, Schutte & Focke, Huron, Pt Plata
1,320 bgs, E A Canalizo & Co, Huron, Pt Plata
50 bgs, A S Lascelles & Co, Bridgetown, Kingston
6 bgs, O Gerdau Co, Manaqui, Cristobal
250 bgs, R Desvernine, Carabobo, La Guayra
1,000 bgs, various consignees, Santa Luisa, Talara
78 bgs, Colombia Amer Corpn, Santa Luisa, Talara
1,500 bgs, W R Grace & Co, Santa Luisa, Talara
200 bgs, Yglesias & Co, San Lorenzo, St Domingo
987 bgs, A Ricart, San Lorenzo, St Domingo
541 bgs, W & A Leaman, Rotterdam, Rotterdam
747 bgs, Jurgens Col Prod Co, Rotterdam, Rotterdam
60 bgs, National City Bank, Silvermaple, Batavia
572 bgs, Archibald & Lewis Co, Voltaire, Trinidad
250 bgs, Daarnhouwer & Co, Dominica, Trinidad
4 bgs, E F Darrell & Co, Dominica, St Lucia
2,700 bgs, W R Grace & Co, Sardinian Prince, Bahia
500 bgs, Bank of America, Sardinian Prince, Bahia
1,000 bgs, various consignees, Sardinian Prince, Bahia
500 bgs, Daarnhouwer & Co, Sardinian Prince, Bahia
90 bgs, Middleton & Co, Nickerie, Paramaribo
58 bgs, Gillespie & Co, Nickerie, Paramaribo
105 bgs, Schall Pavenstedt & Co, Nickerie, Paramaribo
250 bgs, Daarnhouwer & Co, Nickerie, La Guayra
250 bgs, Schall Pavenstedt & Co, Nickerie, Pt Cabello
20 bgs, W & A Leaman, Nickerie, Port au Prince
250 cs, Nieschlag & Co, Munargo, Trinidad
150 bgs, Gillespie & Co, Munargo, Trinidad
2,000 bgs, National City Bank, Hibernia, Bahia
500 bgs, Corn Exchange Bank, Hibernia, Bahia
500 bgs, Royal Bank of Canada, Hibernia, Bahia
4,500 bgs, Farmers Loan & Trust Co, Hibernia, Ilheus
900 bgs, various consignees, Hibernia, Ilheus
9,500 bgs, National City Bank, Hibernia, Ilheus
2,000 bgs, New York Trust Co, Hibernia, Ilheus
3,000 bgs, Royal Bank of Canada, Hibernia, Ilheus
BEANS, COCOA—2,000 bgs, Phila Girard Natl Bank, Hibernia, Ilheus
1,000 bgs, Seaboard Natl Bank, Hibernia, Ilheus
3,000 bgs, Standard Bank South Africa, Hibernia, Ilheus
VANILLA—11 cs, 1,925 lbs, Geo Lueders & Co, Mexico, Vera Cruz
84 cs, 14,700 lbs, Thurston & Braidich, Mexico, Vera Cruz
20 cs, 2,500 lbs, Rene Moelhausen, President Adams, Marseilles
4 cs, 500 lbs, J N Limbert & Co, President Adams, Marseilles
11 cs, 1,375 lbs, consignee to follow, President Adams, Marseilles
19 cs, 2,375 lbs, Geo Lueders & Co, President Adams, Marseilles
93 cs, 11,625 lbs, Runnel Sloan & Co, President Adams, Marseilles
69 cs, J N Limbert & Co, Dominica, Guadeloupe
BENZYL PEROXIDE—2 cs, Strahl & Pitsch, Waaldyk, Rotterdam
BLANC FIXE—79 cks, H Sunheimer, Inc, London Mariner, London
BLUE ULTRAMARINE—20 bbls, Stanley Doggett, Inc, Celtic, Liverpool
BRISTLES—47 cs, Equitable Trust Co, Oscar II, Oslo
122 cks, Equitable Trust Co, Oscar II, Oslo
9 cs, Polack Co, Tuscania, London
30 cs, F H Cone & Co, Liberty, Havre
9 cs, F H Cone & Co, Minnewaska, London
1 ck, Chesnut Cooper & Co, Minnewaska, London
23 cs, Chesnut Cooper & Co, Minnewaska, London
50 cs, Block Bros, President Adams, Shanghai

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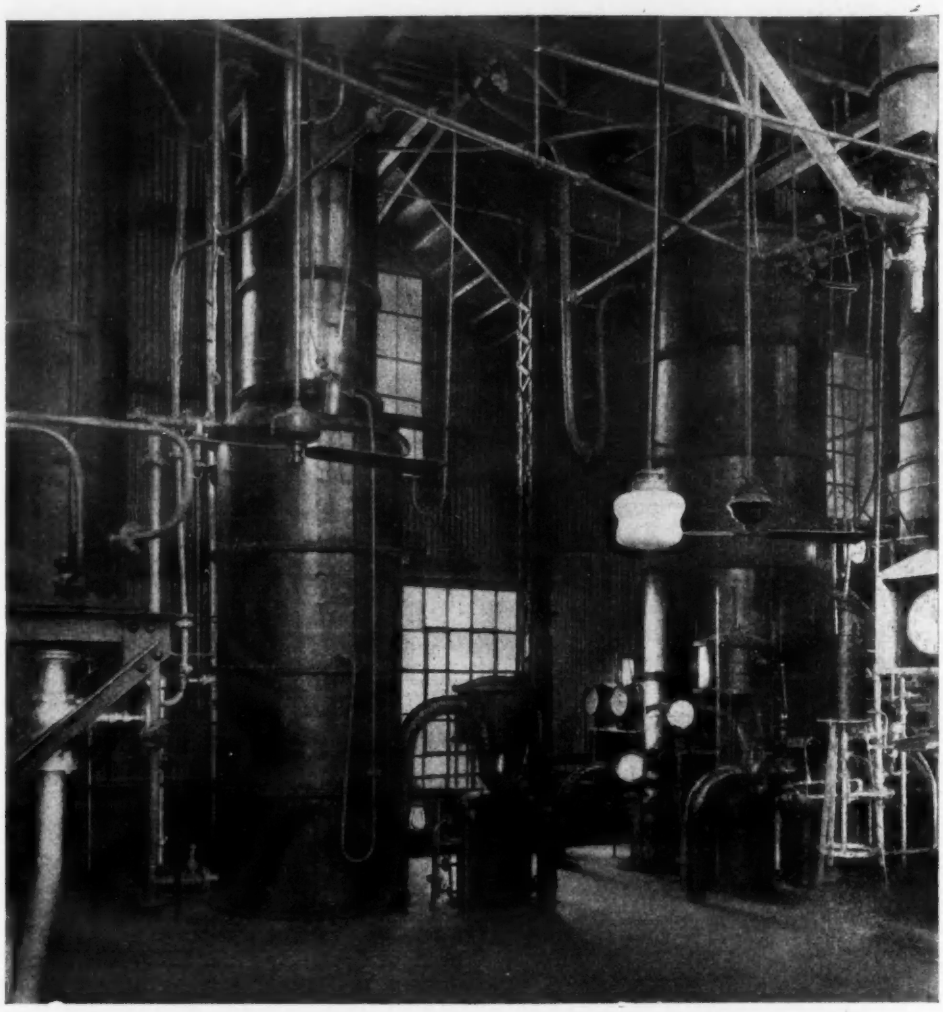
23 cs, F H Cone & Co, Takoeka, Kobe
2 cs, Chesnut Cooper & Co, Takoeka, Kobe
BRONZE POWDER—2 cs, B F Drakenfeld & Co, Columbus, Bremen
17 cs, Gallagher & Ascher, Columbus, Bremen
17 cs, Leo Uhlfelder & Co, Columbus, Bremen
17 cs, B F Drakenfeld & Co, Sierra Cordova, Bremen
7 cs, A C Rempert Co, Orinoco, Hamburg
BUTYL ACETATE—230 dms, Kuttroff, Pickhardt & Co, Bellephine, Rotterdam
CALCIUM, METALLIC—5 cs, Charles Hardy, Inc, Liberty, Havre
CALOMEL—10 cs, Lo Curto & Funk, Minnewaska, London
CAMPHOR CRUDE—550 cs, Mitsui & Co, Takoeka, Keeling
SYNTHETIC—680 cs, 182,454 lbs, E I Dupont de Nemours Co, Bellephine, Rotterdam
CARBON BLACK—1 cs, 231 lbs, Charles Hardy, Inc, Brazil, Hamburg
DECOLORIZING—110 bgs, L A Solomon & Bro, Rotterdam, Rotterdam
CASEIN—200 bgs, 44,000 lbs, A Klipstein & Co, Liberty, Havre
646 bgs, 110,110 lbs, Atterbury Bros, Liberty, Havre
335 bgs, Kurolith Corpn, Suffern, Havre
834 bgs, 110,080 lbs, Atterbury Bros, Sardinian Prince, Buenos Aires
417 bgs, 55,044 lbs, T M Duche & Sons, Sardinian Prince, Buenos Aires
50 bgs, Casein Mfg Co, Munargo, Buenos Aires
CASSIA—100 bls, Arnhold & Co, Chinese Prince, Hongkong
500 cs, O Gross, Chinese Prince Hongkong
ROLLS—100 bls, E L Prior & Co, Takaeka, Hongkong
350 bls, B H Old & Co, Takaeka, Hongkong
CELLULOSE ACETATE—1 cs, 2 cwt 3 qtrs 7 lbs, Celluloid Corp, Carinthia, Liverpool
COMPOUND — 21 cks, 7,350 lbs, Kuttroff, Pickhardt & Co, Brazil, Hamburg
CHALK, BLOCK—770,000 kilos, 1,694,000 lbs, J W Higman Co, Liberty, Dunkirk
500,000 kilos, 1,100,000 lbs, Kidder Peabody Co, Liberty, Dunkirk
CHEMICALS—9 bbls, 2,516 lbs, A V Berner & Co, Albert Ballin, Hamburg
2 cs, 347 lbs, George Luelers & Co, Albert Ballin, Hamburg
4 cs, G J Wallan, Ile de France, Havre
10 cs, State Forwarding & Shipping Co, Ile de France, Havre
28 cs E Fougera & Co, Ile de France, Havre
40 cks, Roessler & Hasslacher Chemical Co, Sierra Cordova, Bremen
5 cks, American Bluefriesveen, Inc, Blydendijk, Rotterdam
10 demij, American Bluefriesveen, Inc, Blydendijk, Rotterdam
5 cks, Pfaltz & Bauer, Blydendijk, Rotterdam
147 cks, Hummel & Robinson, Blydendijk, Rotterdam
1,000 cs, 224,000 lbs, Roessler & Hasslacher Chemical Co, Blydendijk, Rotterdam
2 bbls, H Falck, Orinoco, Hamburg
10 cs, H Falck, Orinoco, Hamburg
35 bgs, Jungmann & Co, Orinoco, Hamburg
6 cs, Jungmann & Co, Orinoco, Hamburg
10 cs, Pfaltz & Bauer, Orinoco, Hamburg
1 carboy, Oakland Chemical Co, London Mariner, London
11 cs, Morana, Inc, Columbus, Bremen
98 cs, Mallinckrodt Chemical Works, Gripsholm, Gothenburg
25 cs, Philipp Bros, Gripsholm, Gothenburg
70 cs, 10,472 lbs, Ferd Van Geisten, Bellepline, Rotterdam
CHEMICALS—12 cks, 12,742 lbs, Ferd Van Geisten, Bellepline, Rotterdam
1 ck, 132 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
4 pkgs, Bayer Co, Inc, Bellepline, Rotterdam
60 dms, 24,024 lbs, Chemical National Bank, Bellepline, Rotterdam
150 dms, 139,535 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
19 cks, General Dyestuff Corp, Bellepline, Rotterdam
15 cs, General Dyestuff Corp, Bellepline, Rotterdam
3 jugs, General Dyestuff Corp, Bellepline, Rotterdam
14 cs, Burroughs, Welcome & Co, Minnewaska, London
10 cks, Pfaltz & Bauer, Minnewaska, London
20 dms, Pfaltz & Bauer, Minnewaska, London
146 cks, 116,967 lbs, American Cyanamid Co, Brazil, Hamburg
60 bbls, 35,904 lbs, Mallinckrodt Chemical Works, Brazil, Hamburg
8 cs, 2,939 lbs, Mallinckrodt Chemical Works, Brazil, Hamburg
20 cks, 12,135 lbs, Jungmann & Co, Brazil, Hamburg
2 cs, Jungmann & Co, Brazil, Hamburg
15 cks, 11,827 lbs, Roessler & Hasslacher Chemical Co, Brazil, Hamburg
1 cs, 61 lbs, Roessler & Hasslacher Chemical Co, Brazil, Hamburg
12 dms, Phoenix Shipping Co, Brazil, Hamburg
60 dms, 52,857 lbs, Kuttroff, Pickhardt & Co, Brazil, Hamburg
11 cs, Perry, Ryer & Co, Brazil, Hamburg
7 carboys, Pfaltz & Bauer, Brazil, Hamburg
20 cks, Pfaltz & Bauer, Brazil, Hamburg
15 cs, Pfaltz & Bauer, Brazil, Hamburg
14 cks, Hans Hinrichs Chemical Corp, Brazil, Hamburg
25 bbls, 12,210 lbs, Equitable Trust Co, Brazil, Hamburg
14 cs, 1,555 lbs, Calcyanide Co, Brazil, Hamburg
8 cs, Hans Hinrichs Chemical Corp, Brazil, Hamburg
20 cks, A Klipstein & Co, Brazil, Hamburg
28 cs, Tice & Lynch, Brazil, Hamburg
50 cs, American Bluefriesveen, Inc, Rotterdam, Rotterdam
20 cs, A Debruille, Suffren, Havre
9 cks, 5,500 lbs, Merck & Co, Albert Ballin, Hamburg
PHOTO—11 cs, G Gennert, Inc, Brazil, Hamburg
CHLOROFORM—1 cs, Burroughs, Welcome & Co, Minnewaska, London
CHROME FERRO — 61 cks, Charles Hardy, Inc, Gripsholm, Gothenburg
CLAY—165 cks, J Dixon Crucible Co, Bellepline, Rotterdam
COBALT OXIDE BLACK — 50 bbls, Belgo-American Trading Corp, Patagonier, Antwerp
COCHINEAL — 15 bgs, 2,100 lbs, American Trading Co, Lutzow, Bremen
7 bgs, 980 lbs, Gaines & Co, Tanta Luisa, Callao
COCONUT—271 bgs, 27,000 lbs, Banana Sales Corp, Cananova, Port Antonio
882 bgs, 88,200 lbs, Franklin Baker Co, Cananova, Port Antonio
87 bgs, 8,700 lbs, De Giorgio Fruit Corp, Amapala, Kingston
1,587 bgs, 158,700 lbs, L Schepp & Co, Manaqui, Kingston
400 bgs, 40,000 lbs, Franklin Baker Co, Manaqui, Kingston
1,339 bgs, 133,900 lbs, Franklin Baker Co, Carabobo, San Juan
55 bgs, 5,500 lbs, M A De Leon & Co, Carabobo, San Juan
300 bgs, 30,000 lbs, J Simon & Co, Carabobo, San Juan
1,000 bgs, 100,000 lbs, Dunham Mfg Co, Voltaire, Trinidad
222 bgs, 22,200 lbs, L Schepp & Co, Ceiba, Jamaica
33 bgs, 3,300 lbs, F W Bussing & Co, Ponce, Mayaguez
133 bgs, 13,300 lbs, Hills Bros Co, Ponce, Mayaguez
26 bgs, 2,600 lbs, J C Carle, Ponce, Mayaguez
373 bgs, 37,300 lbs, Hills Bros Co, Ponce, Aguadilla
127 bgs, 12,700 lbs, F W Bussing & Co, Ponce, Aguadilla
45 bgs, 4,500 lbs, M A De Leon & Co, Ponce, Aguadilla
777 bgs, 77,700 lbs, Franklin Baker Co, Ponce, Aguadilla
16 bgs, 1,600 lbs, C V Smith & Co, Ponce, Aguadilla
DESIC—1,500 cs, 195,000 lbs, Balfour, Williamson & Co, Helenus, Manila
400 cs, 52,000 lbs, Balfour, Williamson & Co, President Adams, Manila
3,543 cs, 460,590 lbs, Franklin Baker Co, President Adams, Manila
200 cs, 26,000 lbs, Charles Jacobs & Co, Maihar, Colombo
352 cs, 45,760 lbs, Habicht, Braun & Co, Maihar, Colombo
165 cs, 21,450 lbs, Dodwell & Co, Lancaster Castle, Colombo
500 cs, 65,000 lbs, T M Duche & Sons, Lancaster Castle, Colombo
COLORS—1 cs, W J Byrnes & Co, Celtic, Liverpool
ALIZARIN—13 cks, General Dyestuff Corp, Rotterdam, Rotterdam
ANILIN—7 kegs, B Bernard, Inc, Celtic, Liverpool
COLORS, ANILIN—6 kegs, American Exchange Irving Trust Co, Penniand, Antwerp
1 ck, American Exchange Irving Trust Co, Penniand, Antwerp
4 dms, American Exchange Irving Trust Co, Penniand, Antwerp
178 cks, General Dyestuff Corp, Bellepline, Rotterdam
2 cs, General Dyestuff Corp, Bellepline, Rotterdam
33 jugs, General Dyestuff Corp, Bellepline, Rotterdam
3 cks, Grasselli Dyestuff Corp, Rotterdam, Rotterdam
6 cs, General Dyestuff Corp, Rotterdam, Rotterdam
13 jugs, General Dyestuff Corp, Rotterdam, Rotterdam
143 cks, General Dyestuff Corp, Rotterdam, Rotterdam
23 dms, General Dyestuff Corp, Rotterdam, Rotterdam
27 cks, Carbic Color & Chem Co, Suffren, Havre
9 cks, The Ciba Co, Inc, Suffren, Havre
3 cks, B Bernard, Inc, President Adams, Genoa
1 dm, American Exchange Irving Trust Co, Albert Ballin, Hamburg
16 cks, General Dyestuff Corp, Albert Ballin, Hamburg
1 cs, General Dyestuff Corp, Albert Ballin, Hamburg
32 pkgs, Sandoz Chem Works, Ile de France, Havre
4 cks, Wetterwald & Pfister, Ile de France, Havre
5 cks, Carbic Color & Chem Co, Ile de France, Havre
14 cks, The Geigy Co, Inc, Ile de France, Havre
2 cks, Wetterwald & Pfister, Orinoco, Hamburg
ARTISTS—4 cs, Artists Brush & Color Co, Minnewaska, London
2 cs, M J Corbett & Co, Blijdenijk, Rotterdam
DRY—4 cks, 492 lbs, W Fezandie & Sperrie, Albert Ballin, Hamburg
EARTH—55 cks, Fezandie & Sperrie, Lutzow, Bremen
42 cks, Fezandie & Sperrie, Karlsruhe, Bremen
56 cks, General Dyestuff Corp, Sierra Cordora, Bremen
8 cs, Z F Drakenfeld & Co, Sierra Cordora, Bremen
40 cks, Wishnick, Tumpeer, Inc, Blijdendijk, Rotterdam
305 cks, Stanley, Doggett, Inc, Blijdendijk, Rotterdam
11 cks, Schmidt, Pritchard Co, Orinoco, Hamburg
COPRA—16 bgs, Franklin Baker Co, Manaqui, Kingston
3 bgs, Franklin Baker Co, Carabobo, San Juan
2,060 bgs, Franklin Baker Co, Silvermaple, Manila
CORK, WOOD—204 bls, 20,400 lbs, H A Guernsey, Half Moon, Algiers
CRESOL, LIQUID—2 dms, The Tar Acid Refg Corp, Celtic, Liverpool
SOLID—85 kegs, The Tar Acid Refg Corp, Celtic, Liverpool
CUBEBS—30 bgs, Anglo South American Trust Co, Lancaster Castle, Singapore
CUDBEAR—2 cks, S B Penick & Co, Inc, Minnewaska, London
CUTCH—2,440 bgs, Philippine Cutch Corp, Fairfield City, Bamboanga
DEKOL—25 cks, General Dyestuff Corp, Bellepline, Rotterdam
DEXTRIN—50 bgs, Jos Morningstar & Co, Oscar II, Oslo
100 bgs, Stein, Hall & Co, Oscar II, Oslo
DIVI DIVI—662 bgs, 66,200 lbs, R Desvernine, Nickerie, Pampatar
586 bgs, 58,600 lbs, Goldsmith & Co, Inc, Nickerie, Puerto Lucre
EARTH, FULLERS—350 bgs, 70,000 lbs, La Solomon & Bro, Minnewaska, London
EGG YOLK—112 cs, 22,400 lbs, Arnhold & Co, Takaoka, Hankow
56 cs, 11,200 lbs, Gallagher & Ascher, Takaoka, Hankow
112 cs, 22,400 lbs, A Hurst & Co, Takaoka, Hankow
224 cs, 44,800 lbs, Joe Lowe Corp, Takaoka, Hankow
68 cs, 13,600 lbs, Consumers Import Co, Takaoka, Hankow
134 cs, 26,800 lbs, Burr & Palmer, Takaoka, Hankow
67 cs, 13,400 lbs, F W Frost & Co, Takaoka, Tientsin
56 cs, 11,200 lbs, J Lowe & Co, Takaoka, Tientsin
56 cs, 11,200 lbs, T M Duche & Sons, Takaoka, Tientsin
EPSOM SALT—225 cks, The Goldschmidt Corp, Karlsruhe, Bremen
200 bgs, A Klipstein & Co, Sierra Cordova, Bremen
ERGOT—9 bgs, 712 lbs, J L Hopkins & Co, (name omitted last week), Providence, Lisbon
ETHYLENE DIBROMIDE—47 bbls, 49,896 lbs, Potash Import Co, Brazil, Hamburg
EXTRACT PINE LEAF—3 cs, 1,009 lbs, F Schenck Co, Albert Ballin, Hamburg
SEAWEED—25 bgs, National Gum & Mica Co, Celtic, Liverpool
GELATIN—70 bbls, Delft Gelatine Works, Rotterdam, Rotterdam
38 kegs, Delft Gelatine Works, Rotterdam, Rotterdam
60 cs, W E Miller, Ile de France, Havre
GLASS, PLATE—1 cs, Semon Bache & Co, Celtic, Liverpool
29 cs, Schienk & Co, Pennland, Antwerp
48 cs, Mark Bros, Pennland, Antwerp
34 cs, Van Oppen & Co, Pennland, Antwerp
10 cs, French American Banking Corp, Pennland, Antwerp
48 cs, L Solomon & Son, Pennland, Antwerp
16 cs, Brown Bros & Co, Pennland, Antwerp
2 cs, Semon Bache & Co, Karlsruhe, Bremen
43 cs, Van Oppen & Co, Carinthia, Liverpool
33 cs, Royal Glass Works, Brazil, Hamburg
2 cs, Aetna Glass & Mirror Works, Brazil, Hamburg
10 cs, L Solomon & Son, Brazil, Hamburg
26 cs, L Solomon & Son, Patagonier, Antwerp
23 cs, French American Banking Corp, Patagonier, Antwerp
20 cs, Brown Bros & Co, Patagonier, Antwerp
18 cs, Lazard Bros, Albert Ballin, Hamburg
SHEET—15 cs, Bienenfeld Import Co, Albert Ballin, Hamburg
73 cs, Bienenfeld Import Co, Orinoco, Hamburg
34 cs, Lafayette Mirror & Glass Co, Orinoco, Hamburg
34 cs, Schrenk & Co, Orinoco, Hamburg

Current Prices are now printed in connection with the Market Reports. See index, page 2.

AMERSOL
QUALITY-CONTROL SERIES
Bulletin No. 4
SUBJECT: Control of Distillation and Rectification



CONTINUOUS FRENCH DISTILLATION PROCESS USED IN ONE OF THE MODERN AMER-SOL ALCOHOL PLANTS
(Partial View of Stills)

¶ The Continuous Process of Distillation and Rectification, as employed in AMER-SOL plants, is under rigid mechanical and laboratory control. It produces AMER-SOL Alcohol of the highest grade . . . by effecting the closest possible separation of Alcohol from fermentation impurities and the by-products of Alcohol. It also gives a product of utmost uniformity.

"AMER-SOL Quality-Control Bulletins," describing the successive stages of modern Alcohol manufacture, will be sent on request to those who make request on their letter head.

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SALES OFFICES AND WAREHOUSES ALL OVER THE COUNTRY. UNRIVALLED SERVICE.

AMERSOL
BRAND
Industrial Alcohol
(All Formulas)
SOLVENTS - PLASTICIZERS - CHEMICALS

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GLASS, WINDOW—63 cs, L Solomon & Son, Pennland, Antwerp
1,155 cs, Manufacturers Trust Co, Pennland, Antwerp
58 cs, Semon, Bache & Co, Pennland, Antwerp
10 cs, American Exchange Irving Trust Co, Pennland, Antwerp
715 cs, American Express Co, Pennland, Antwerp
8 cs, Farmers Loan & Trust Co, Transylvania, Glasgow
6 cs, Morris Glass Co, Transylvania, Glasgow
19 cs, Semon, Bache & Co, Karlsruhe, Bremen
18 cs, Leo Popper & Son, Carinthia, Liverpool
36 cs, Myer Plate Glass Co, Carinthia, Liverpool
98 cs, Farmers Loan & Trust Co, Carinthia, Liverpool
3,851 cs, Royal Glass Works, Patagonier, Antwerp
60 cs, J H Werbelowsky & Son, Patagonier, Antwerp
48 cs, Schrenk & Co, Orinoco, Hamburg
GLUE—200 bgs, N L Lederer, Saturnia, Trieste
LEATHER—10 tins, 970 lbs, Leather Trading Corpn, Bellepline, Rotterdam
MARINE—18 crts, L W Ferdinand & Co, American Trader, London
8 tins, L W Ferdinand & Co, American Trader, London
GLUESTOCK—237 bls, C A Haynes & Co, Bellepline, Rotterdam
GRAPHITE—78 bbls, Jos Dixon Crucible Co, Helenus, Colombo
333 bgs, Jos Dixon Crucible Co, Helenus, Colombo
333 bgs, G F Pettinos, Maihar, Colombo
286 bgs, 500 cwt, Asbury Graphite Mills, Silvermaple, Colombo
34 bbls, 200 cwt, Asbury Graphite Mills, Silvermaple, Colombo
31 bbls, 200 cwt, Jos Dixon Crucible Co, Silvermaple, Colombo
286 bgs, 500 cwt, J F Starkey & Co, Silvermaple, Colombo
110 bbls, 724 cwt, J F Starkey & Co, Silvermaple, Colombo
133 bbls, 900 cwt, Jos Dixon Crucible Co, Silvermaple, Colombo
821 bgs, 1,500 cwt, Jos Dixon Crucible Co, Silvermaple, Colombo
625 bgs, C E Pettinos, Ile de France, Havre
GREASE, WOOL—5 bbls, E M Javitz & Son, Tuscania, London
7 kgs, E M Javitz & Son, Tuscania, London
100 cks, A Klipstein & Co, Lutzow, Bremen
200 cks, A Klipstein & Co, Karlsruhe, Bremen
30 cks, Pfaltz & Bauer, Karlsruhe, Bremen
50 bbls, Pfaltz & Bauer, Sierra Cordova, Bremen
GUM ALOES—255 cs, Eelma Mercantile Corpn, Carabobo, Curacao
ARABIC—100 bgs, North German Lloyd, Lutzow, Bremen
210 bgs, 44,880 lbs, Wm Mohrman, Maihar, Port Sudan
157 bgs, 33,550 lbs, S B Penick & Co, Inc, Maihar, Port Sudan
300 bgs, 67,819 lbs, T M Duche & Sons, Maihar, Pt Sudan
125 bgs, National Gum & Mica Co, Maihar, Port Said
100 bgs, Innis, Speiden & Co, Maihar, Port Said
BENZOIN—23 cs, 2,492 lbs, Standard Bank South Africa, Bellenline, Rotterdam
39 cs, National City Bank, President Adams, Bankok
COPAL—234 bgs, A Klipstein & Co, Helenus, Manila
4 cs, A Klipstein & Co, Helenus, Manila
120 bgs, W H Scheel, Helenus, Manila
64 bgs, Stroock & Wittenburg, Helenus, Singapore
192 bgs, G W S Patterson & Co, Helenus, Singapore
262 bgs, L C Gillespie & Sons, Helenus, Singapore
50 cs, J D Lewis, Helenus, Singapore
30 cs, W H Scheel, Helenus, Singapore
161 bgs, G W S Patterson & Co, Pennland, Antwerp
100 bgs, Paterson, Boardman & Knapp, Pennland, Antwerp
100 bgs, W H Scheel, Pennland, Antwerp
55 bgs, Innes & Co, Pennland, Antwerp
74 bskts, Innes & Co, Lancaster Castle, Macassar
350 bskts, L C Gillespie & Sons, Lancaster Castle, Macassar
69 bskts, G H Lincks & Co, Lancaster Castle, Macassar
204 bskts, W H Scheel, Lancaster Castle, Macassar
65 bskts, G W S Patterson & Co, Lancaster Castle, Macassar
465 bskts, S Winterbourne & Co, Lancaster Castle, Macassar
412 bskts, H W Peabody & Co, Lancaster Castle, Macassar
553 bskts, France, Campbell & Darling, Lancaster Castle, Macassar
200 bgs, S Winterbourne & Co, Patagonier, Antwerp
400 bgs, Innes & Co, Patagonier, Antwerp
20 bgs, Stroock & Wittenberg, Eastern Dawn, Antwerp
600 bgs, Paterson, Boardman & Knapp, Eastern Dawn, Antwerp
DAMMAR—100 cs, L C Gillespie & Sons, Helenus, Singapore
70 bgs, W W Scheel, Helenus, Singapore
70 bgs, S Winterbourne & Co, Helenus, Singapore
350 bgs, L C Gillespie & Sons, Helenus, Singapore
320 bgs, Paterson, Boardman & Knapp, Helenus, Singapore
150 cs, S Winterbourne & Co, President Adams, Singapore
192 bgs, S Winterbourne & Co, President Adams, Singapore
200 cs, G W S Patterson & Co, Silvermaple, Batavia
100 cs, Innes & Co, Silvermaple, Batavia
200 cs, S Winterbourne & Co, Silvermaple, Batavia
100 cs, J D Lewis, Silvermaple, Singapore
100 cs, L Littlejohn & Co, Lancaster Castle, Singapore
50 cs, J D Lewis, Lancaster Castle, Singapore
200 cs, L C Gillespie & Sons, Lancaster Castle, Batavia
200 cs, Paterson, Boardman & Knapp, Lancaster Castle, Batavia
50 cs, Stroock & Wittenberg, Lancaster Castle, Batavia
70 bgs, L C Gillespie & Sons, Chinese Prince, Singapore
70 bgs, Brown Bros & Co, Chinese Prince, Singapore
100 cs, S Winterbourne & Co, Chinese Prince, Batavia
232 bgs, Paterson, Boardman & Knapp, Chinese Prince, Batavia
GUAIAC—5 bbls, A Ricart, Huron, Azua
1 bbl, A Ricart, Huron, Barahona
MYRRH—5 cs, King & Howe, Tuscania, London
16 bgs, 1 ton, 11 cwt, 3 qtrs, Anglo-South American Trust Co, Fairfield City, Aden
SHIRAZ—106 bgs, 21,320 lbs, Wm Mohrman, Albert Ballin, Hamburg
GUM, TALHA—50 bgs, 11,121 lbs, Orbis Products Trading Co, Maihar, Port Sudan
TRAGACANTH—118 bgs, Lutzow, Bremen
44 bgs, Wm Mohrman, Minnewaska, London
HAIR, HORSE—45 cs, Bertolino & Co, Takaoka, Tientsin
68 cs, Bingham & Co, Takaoka, Tientsin
HERBS, EPHEDIA VULGARIS—112 bgs, Wah Chang Trading Corpn, Takaoka, Tientsin
102 bgs, Inland Alkaloid Co, Takaoka, Tientsin
MEDICINAL—24 bls, 9,185 lbs, Wm Benkert & Co, Brazil, Hamburg
41 bls, 11,110 lbs, Brown Bros & Co, Brazil, Hamburg
74 bls, Archibald & Lewis Co, Saturnia, Trieste
62 bls, Asia Drug Co, Saturnia, Trieste
1 bl, Wm Benkert & Co, Saturnia, Trieste
INDIGO—46 cks, The Ciba Co, Inc, Ile de France, Havre
INTERMEDIATES—12 cks, 3,900 lbs, Grasselli Dyestuff Corpn, Bellepline, Rotterdam
45 cks, General Dyestuff Corpn, Bellepline, Rotterdam
84 cks, General Dyestuff Corpn, Rotterdam, Rotterdam
10 dms, American Exchange-Irving Trust Co, Albert Ballin, Hamburg
2 cs, General Dyestuff Corpn, Albert Ballin, Hamburg
IODINE—257 kegs, Nash, Watjen & Bangs, Ltd, Santa Luisa, Iquique
IRON OXIDE—10 cks, 6,000 lbs, J H Rhodes & Co, Celtic, Liverpool
20 kegs, J H Rhodes & Co, Celtic, Liverpool
5 cks, 1 ton, 6 cwt, 3 qtrs, 24 lbs, J Lee Smith, Carinthia, Liverpool
56 cks, 18 tons, 14 cwt, 2 qtrs, J A McNulty, Carinthia, Liverpool
10 cks, 2 tons, 13 cwt, 3 qtrs, 20 lbs, J H Nicholson & Co, Carinthia, Liverpool
136 cks, 36 tons, 16 cwt, 3 qtrs, 12 lbs, Reichard-Coulston, Inc, Carinthia, Liverpool
13 cks, 5 tons, 9 cwt, 2 qtrs, 4 lbs, C J Osborn & Co, Carinthia, Liverpool
10 cks, 6,000 lbs, Whittaker, Clark & Daniels, Sierra Cordoba, Bremen
40 cks, 24,000 lbs, V G Thomas Co, Sierra Cordoba, Bremen
KAOLIN—100 cks, 47,080 lbs, Roessler & Hasslacher Chem Co, Brazil, Hamburg
LEAVES, LAUREL—100 bls, Rene Moelhausen, Saturnia, Trieste
MEDICINAL—3 bls, 974 lbs, Peek & Velsor, Inc, Albert Ballin, Hamburg
PATCHOULI—80 bls, W J Bush & Co, Helenus, Penang
118 bls, K Mertig, Lancaster Castle, Penang
LIME JUICE—230 cs, J P Smith & Co, American Trader, London
CONCENTRATED—1 bbl, Bermuda & West Indies S S Co, Dominica, Barbados
8 cks, Park, Benziger & Co, Dominica, St Lucia
84 cks, Merck & Co, Dominica, St Lucia
10 cks, Gillespie & Co, Dominica, Martinique
11 cks, Middleton & Co, Dominica, Martinique
7 cks, Merck & Co, Dominica, Dominica
4 cks, Planters' Prod Co, Dominica, Dominica
12 cks, Merck & Co, Dominica, Dominica
RAW—36 hhd, Evans Sons, Leecher & Webb, Ltd, Dominica, Dominica
LITHOPONE—700 cks, 380,000 lbs, Benj Moore & Co, Rotterdam, Rotterdam
138 cks, 75,900 lbs, C J Osborn & Co, Rotterdam, Rotterdam
700 cks, 380,000 lbs, Benj Moore & Co, Blydendijk, Rotterdam
LOGWOOD EXTRACT—296 cs, J S Young Co, Takaoka, Kobe
MACE—84 cs, E Bonstead & Co, Lancaster Castle, Singapore
80 cs, New York Trust Co, Chinese Prince, Singapore
MAGNESIA, CALCINED—15 cs, 19 cwt, 2 qtrs, 18 lbs, Fred Stearn & Co, Inc, Carinthia, Liverpool
CHLORIDE—222 dms, 34,920 lbs, H J Baker & Bro, Brazil, Hamburg
METAL—9 cs, 1,476 lbs, Kuttroff, Pickhardt & Co, Albert Ballin, Hamburg
MAGNESITE, CALCINED—10 cks, 53,000 lbs, Speiden-Whitfield Co, Rotterdam, Rotterdam
400 bbls, 200,000 lbs, Innis, Speiden & Co, Rotterdam, Rotterdam
MANGANESE ORE—460 bgs, Equitable Trust Co, Ponce, Ponce
MANJAK—50 bbls, C H Watts Co, Inc, Dominica, Barbados
METHYLENE CHLORIDE—2 dms, 2,699 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
MYROBALANS—2,000 pockets, Standard Bank of South Africa, Maihar, Calcutta
NUTGALLS—100 bgs, K Mertig, Takoeka, Hankow
NUTMEG—84 bgs, E L Prior & Co, Helenus, Singapore
1 bbl, Park Benziger & Co, Dominica, St Lucia
168 bgs, E L Prior & Co, Chinese Prince, Singapore
NUX VOMICA—1,040 bgs, Volkart Bros, Helenus, Mealeipuran
OIL, ALMOND—4 cs, Ungerer & Co, American Trader, London
ANISE STAR—10 dms, Hanish, Love & Pauli, Inc, Helenus, Hongkong
BAY—2 cs, Park Benziger & Co, Dominica, St Lucia
BIRCH BAR—7 dms, Lo Curto & Funk, Brazil, Hamburg
1 dm, 1,416 lbs, Dodge & Olcott Co, Albert Ballin, Hamburg
CASSIA—10 dms, Dodge & Olcott Co, Takoeka, Hongkong
CHINAWOOD—150 dms, L C Gillespie & Sons, Takoeka, Hongkong
CINNAMON LEAF (correction)—In previous issue Verona Chem Co was credited with 9 dms; should have read T M Duche & Sons, Minnetonka, London
CITRONELLA—4 dms, 4,000 lbs, Bank of America, Silvermaple, Batavia
18 dms, 18,000 lbs, Catz American Co, Silvermaple, Batavia
2 dms, 2,000 lbs, Stein, Hall & Co, Lancaster Castle, Batavia
COCONUT—766 tons, Spencer Kellogg & Sons, Helenus, Manila
986 tons, Philippine Refg Corpn, Silvermaple, Cebu
999 tons, Philippine Refg Corpn, Silvermaple, Cebu
1,170 tons, Spencer Kellogg & Sons, Takeoka, Manila
1,280 tons, Spencer Kellogg & Sons, Chinese Prince, Manila
COD—200 cks, 10,000 gls, National Oil Prod Co, Silvia, St John's
60 cks, 3,000 gls, Silvia, St John's
CODLIVER—1 cs, Bayer Corpn, London Mariner, London
CORN—58 bbls, Wm Porter & Co, Minnekhada, London
58 bbls, 12 tons, 4 cwt, 2 qtr, 12 lbs, Wm Porter & Co, Carinthia, Liverpool
ESSENTIAL—20 cs, P R Dreyer, Providence, Marseilles
2 cs, Heine & Co, Columbus, Bremen
OIL, ESSENTIAL—5 cs, Lo Curto & Funk, Brazil, Hamburg
1 cs, Colgate & Co, Rotterdam, Rotterdam
8 cs, Polaks Frutal Works, Rotterdam, Rotterdam
5 cs, Rogers & Gallet, Suffern, Havre
2 tins, T M Duche & Sons, President Adams, Marseilles
2 cs, Runnell, Sloan & Co, President Adams, Marseilles
2 cs, Geo Lueders & Co, Albert Ballin, Hamburg
16 cs, Brown Bros & Co, Ile de France, Havre
6 cs, Dodge & Olcott Co, Ile de France, Havre
42 cs, A Bourjois & Co, Ile de France, Havre
1 cs, Benj French Co, Ile de France, Havre
17 cs, Bank of United States, Ile de France, Havre
12 cs, C & N Sellers, Ile de France, Havre
25 cs, State Forwarding & Shipping Co, Ile de France, Havre
53 cs, G Delawanna, Ile de France, Havre
11 cs, Ungerer & Co, Ile de France, Havre
8 cs, Geo Lueders & Co, Ile de France, Havre
2 cs, Geo Silver Import Co, Ile de France, Havre
5 cs, Yboy, Inc, Ile de France, Havre
4 cs, Lo Curto & Funk, Ile de France, Havre
22 cs, Fritzsche Bros, Sierra Cordova, Bremen
11 cs, A H Smith & Co, Homeric, Southampton
FAT—7 cs, Lo Curto & Funk, Saturnia, Trieste
GERANIUM—2 dms, 728 lbs, Lo Curto & Funk, Half Moon Algiers
LEMON—100 qr cs, Lamman & Kamp, Alberta, Messina
LEMON GRASS—16 dms, Volkart Bros, Helenus, Mealeipuran
7 dms, consignee to follow, Helenus, Mealeipuran
LIME—4 cs, Park, Benziger & Co, Dominica, St Lucia
13 cs, Dodge & Olcott Co, Dominica, St Lucia
2 dms, Gillespie & Co, Dominica, Martinique
2 cs, Middleton & Co, Dominica, Martinique
17 cs, Dodge & Olcott Co, Dominica, Dominica
4 half cs, Planters' Prod Co, Dominica, Dominica
1 cs, Planters' Prod Co, Dominica, Antigua
LUBRICATING—50 dms, Kuhne-Libby Co, Patagonier, Antwerp
200 dms, L S Tainter, Eastern Dawn, Antwerp
MAIZE—60 bbls, I R Boody & Co, Tuscania, London
OLIVE—100 cs, 1,000 gls, Merchants' National Bank, President Adams, Genoa
40 cs, 400 gls, R W Greef & Co, President Adams, Genoa
55 cs, 550 gls, Chase National Bank, President Adams, Genoa
32 cs, 320 gls, C Granata & Co, President Adams, Genoa
100 cs, 1,000 gls, A J Capone, President Adams, Genoa
565 cs, 5,650 gls, Bank of America, National Association, President Adams, Genoa
90 cs, 900 gls, Aprea Bros, President Adams, Genoa
100 cs, 1,000 gls, Latorraca Bros, President Adams, Genoa
300 cs, 3,000 gls, J Monroe & Co, President Adams, Genoa
100 cs, 1,000 gls, Banco Di Sicilia Trust Co, President Adams, Genoa
495 cs, 4,950 gls, P Pastene & Co, President Adams, Genoa
185 cs, 1,850 gls, First National Bank, President Adams, Genoa
500 cs, 5,000 gls, I F Rancallio, President Adams, Genoa
135 cs, 1,350 gls, R Martorelli, President Adams, Genoa
75 cs, 750 gls, Chase National Bank, President Adams, Genoa
55 cs, 550 gls, L Gandolfi & Co, President Adams, Genoa
150 cs, 1,500 gls, F Romeo & Co, President Adams, Genoa
225 cs, 2,250 gls, Pfaltz & Bauer, President Adams, Genoa
50 cs, 500 gls, G Montagnino, President Adams, Genoa
100 cs, 1,000 gls, Banco Di Roma, President Adams, Genoa
PALM—81 cks, D Bacon, Celtic, Liverpool
150 bbls, United States Steel Prod Co, Fairfield City, Belawan Deli
769 bbls, Indies Products Co, Fairfield City, Belawan Deli
118 dms, Indies Products Co, Fairfield City, Port Swettenham
38 cks, African & Eastern Trading Co, Albert Ballin, Hamburg
450 dms, African & Eastern Trading Co, Albert Ballin, Hamburg
PEANUT—300 tons, J Bibby & Son, Celtic, Liverpool
PINE RESIDUE—20 cks, 9,440 lbs, Blackman-Hageman Corpn, Bellepline, Rotterdam
RAPESEED—300 dms, Mitsui & Co, Takaoka, Kobe
150 dms, Mitsui & Co, Takaoka, Osaka
75 dms, Kongo Shokai, Takaoka, Osaka
100 dms, W R Grace & Co, Takaoka, Osaka
100 dms, I R Boody & Co, Takaoka, Kobe
SEAL—100 bbls, Bowring & Co, Silvia, St John's
100 cks, Robt Badcock & Co, Silvia, St John's
SHARK—10 bbls, Leather Finance Corpn, Dominica, St Thomas
SOYA BEAN—394 tons, Mitsui & Co, Takaoka, Dairen
SPERM—100 bbls, National Oil Products Co, Transylvania, Glasgow
SULPHUR—300 bbls, 15,000 gls, Banca Italiana Trust Co, Half Moon, Algiers
200 dms, Banca Com'l Italiana Trust Co, Half Moon, Algiers
176 dms, St Clair Oil Co, Half Moon, Algiers
100 bbls, 5,000 gls, J B Dewsnap & Co, Half Moon, Algiers
200 dms, H W Peabody & Co, Half Moon, Algiers
400,000 kilos, 880,000 lbs, Leghorn Trading Co, Half Moon, Bari
PAINT—6 cs, W H S Lloyd Co, Inc, American Trader, London
1 ck, W H S Lloyd Co, Inc, American Trader, London
12 cs, Andersen, Meyer & Co, President Adams, Shanghai
PARALDEHYDE—20 cs, 2,945 lbs, Francis H Ruhe, Brazil, Hamburg
PEPPER, BLACK—612 bgs, Catz American Co, Rotterdam, Rotterdam
100 bgs, Equitable Trust Co, Rotterdam, Rotterdam
250 bgs, Nassau National Bank, Lancaster Castle, Batavia
710 bgs, Catz American Co, Chinese Prince, Batavia
250 bgs, A Joensson & Co, Inc, Chinese Prince, Batavia
PEPPER, WHITE—70 bgs, Volkart Bros, Tuscania, London
PETROLEUM, CRUDE—68,500 bbls, 2,877,000 gls, Gulf Refining Co, Gulfqueen, Las Piedras
69,500 bbls, 2,919,000 gls, Gulf Refining Co, Gulfbreeze, Las Piedras
78,000 bbls, 3,276,000 gls, Standard Oil Co, Hoxbar, Mamomal
50,000 bbls, 2,100,000 gls, Warner-Quinlan Co, Vaba, Tampico
75,000 bbls, 3,150,000 gls, Standard Oil Co, Matialeock, Tampico
70,661 bbls, 2,967,762 gls, Pan-American Petroleum Corpn, F R Kellogg, Aruba
50,319 bbls, 2,113,398 gls, Asiatic Petroleum Co, War Nawab, Curacao
94,934 bbls, 3,987,228 gls, Tidewater Oil Co, Axtell J Byles, Las Piedras
73,705 bbls, 3,095,610 gls, Pan-American Corpn, Elisha Walker, Aruba
71,000 bbls, 2,982,000 gls, Standard Oil Co, Josiah Macy, Mamomal
68,108 bbls, 2,860,536 gls, Pan-American Corpn, Mendocino, Aruba
25,000 bbls, 1,050,000 gls, Gulf Refining Co, Acosta, Las Piedras
PIMENTO—200 bgs, 28,000 lbs, Barclay Bank, Manaqui, Kingston
PLASTER—4,000 tons, J F Whitney & Co, Nidarholm, Windsor
2,400 tons, Atlantic Gypsum Prod Co, Pluto, Walton
2,420 tons, Atlantic Gypsum Prod Co, Facto, Cheticamp
POTASH CARBONATE—91 cks, 72,171 lbs, A Klipstein & Co, Brazil, Hamburg
CAUSTIC—474 dms, A Klipstein & Co, Brazil, Hamburg
296 dms, Innis, Speiden & Co, Albert Ballin, Hamburg
130 dms, Roessler & Hasslacher Chem Co, Albert Ballin, Hamburg
CHLORATE—200 bbls, 25,060 lbs, E Suter & Co, Liberty, Havre
3,600 cks, 459,360 lbs, Uniform Chem Prod, Inc, Brazil, Hamburg
600 kgs, 76,560 lbs, Monmouth Chem Corpn, Albert Ballin, Hamburg
700 kgs, Monmouth Chem Corpn, Orinoco, Hamburg
MURIATE—1,750 bgs, N V Potash Export My, Pennland, Antwerp
1,000 bgs, N V Potash Export My, Jakob Maersk, Barcelona
NITRATE—454 bgs, 100,878 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
PERMANGANATE—100 dms, 46,860 lbs, Roessler & Hasslacher Chem Co, Bellepline, Rotterdam
PRUSSIATE RED—20 cks, 2,442 lbs, A Klipstein & Co, Eastern Dawn, Antwerp
PRUSSIATE YELLOW—20 cks, 12,144 lbs, Roessler & Hasslacher Chem Co, Bellepline, Rotterdam
SULPHATE—4 cks, 2,402 lbs, Mallinckrodt Chem Works, Albert Ballin, Hamburg
QUEBRACHO EXTRACT—3,357 bgs, The Tannin Corpn, Voltaire, Buenos Aires
230 bgs, The Tannin Corpn, Munargo, Buenos Aires
RESIN, PINE—80 bbls, 31,570 lbs, Max Gruenhurt, Inc, Albert Ballin, Hamburg
ROOT, ARROW—20 cs, J P Smith & Co, Minnewaska, London
GENTIAN—86 bgs, La Bourdonnais, Bordeaux
GINGER—90 bgs, Gillespie & Co, Manaqui, Kingston
14 bgs, D Steeengrafe, Carabobo, San Juan
6 bgs, Fruit Dispatch Co, Pastores, Port Limon
IPECAC—2 bgs, Ultramares Corpn, Bridgetown, Cartagena
13 bls, Ultramares Corpn, Sardinian Prince, Bahia
10 bgs, Ultramares Corpn, Sixaola, Cartagena
MEDICINAL—12 bgs, Wm Benkert & Co, Brazil, Hamburg
7 bls, Peek & Velsor, Inc, Saturnia, Trieste
6 bls, Wm Benkert & Co, Saturnia, Trieste
SARSAPARILLA—33 bls, Hensel, Bruckmann & Lorbacher, Canto, Tampico
1 bg, Park, Benziger & Co, Dominica, Santa Lucia
3 bls, International Overseas Corpn, Comayagua, Puerto Cortez
ROSIN—13 cks, 5,196 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
SAGO FLOUR—733 bgs, E Bonstead & Co, Lancaster Castle, Singapore
362 bgs, E Bonstead & Co, Fairfield City, Singapore
SAND—67 cks, 24,173 lbs, Alpha Lux Co, Inc, Bellepline, Rotterdam
SEED, CANARY—1,830 bgs, various consignees, Sardinian Prince, Buenos Aires
234 bgs, W L Newberry, Sardinian Prince, Buenos Aires
250 bgs, P H Petry & Co, La Bourdonnais, Bordeaux
275 bgs, J Ohana, La Bourdonnais, Bordeaux
215 bgs, Central Vermont Railroad, La Bourdonnais, Bordeaux
250 bgs, A G Dunn, La Bourdonnais, Bordeaux
100 bgs, G T German, La Bourdonnais, Bordeaux
CARAWAY—200 bgs, 22,000 lbs, Catz American Co, Waaldijk, Rotterdam
100 bgs, 11,000 lbs, Catz American Co, Rotterdam, Rotterdam
100 bgs, 11,000 lbs, C M Sillevoldt, Inc, Rotterdam, Rotterdam
100 bgs, 11,000 lbs, Knickerbocker Mills Co, Rotterdam, Rotterdam
100 bgs, 11,000 lbs, R L Friedler, Rotterdam, Rotterdam
100 bgs, 11,000 lbs, Habicht, Braun & Co, Rotterdam, Rotterdam
CORIANDER—273 bgs, 33,033 lbs, A G Dunn, Half Moon, Casablanca
1,000 bgs, Brown Bros & Co, La Bourdonnais, Bordeaux
CUMIN—10 bgs, Central Vermont Railroad, La Bourdonnais, Bordeaux
FENUGREEK—10 bgs, Central Vermont Railroad, La Bourdonnais, Bordeaux
FLEA—15 bgs, 1,650 lbs, Wm Benkert & Co, Providence, Marseilles
MEDICINAL—2 bgs, S B Penick & Co, Inc, Minnewaska, London
51 bgs, 6,732 lbs, S B Penick & Co, Inc, Albert Ballin, Hamburg
35 bgs, 4,620 lbs, S B Penick & Co, Inc, Orinoco, Hamburg
MUSTARD—50 bgs, Archibald & Lewis Co, Rotterdam, Rotterdam
330 bgs, Catz American Co, Rotterdam, Rotterdam
POPPY—100 bgs, N C Littauer, Rotterdam, Rotterdam
300 bgs, C M Sillevoldt, Inc, Rotterdam, Rotterdam
RAPE—150 bgs, A G Dunn, Albert Ballin, Hamburg
150 bgs, Whitney Eckstein Seed Co, Blydendijk, Rotterdam
SHELLAC—50 cs, Everett Carleton Co, Waaldijk, Rotterdam
160 cs, Rogers Pyatt Shellac Co, Maihar, Calcutta
500 bgs, Rogers Pyatt Shellac Co, Maihar, Calcutta
200 bgs, E E Androvette, Maihar, Calcutta
400 bgs, Wm Zinsser & Co, Maihar, Calcutta

Current Prices are now printed in connection with the Market Reports. See index, page 2.

RED-LEAD

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Painters' red-lead, varnish-makers' red-lead, color-makers' red-lead, battery red-lead, glass-makers' red-lead—these oxides can be had from us, as well as litharge and orange mineral.

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New York, 111 Broadway — Boston, 800 Albany Street
Buffalo, 116 Oak Street — Chicago, 900 West 18th Street
Cincinnati, 659 Freeman Ave. — Cleveland, 820 West Superior Ave.
St. Louis, 722 Chestnut St. — San Francisco, 235 Montgomery St.
Pittsburgh, National Lead & Oil Co. of Pa., 316 Fourth Avenue
Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut Street

SHELLAC—200 bgs, Montrose Corp, Maihar, Calcutta
300 bgs, H W Peabody & Co, Maihar, Calcutta
100 bgs, British Bank of South America, Maihar, Calcutta
10 bgs, A Hurst & Co, Orinoco, Hamburg
SEEDLAC—240 bgs, Rogers Pyatt Shellac Co, Maihar, Calcutta
200 bgs, British Bank of South America, Maihar, Calcutta
250 bgs, H W Peabody & Co, Maihar, Calcutta
STICKLAC—300 bgs, E E Androvette, Maihar, Calcutta
70 bgs, F B Ross & Co, Chinese Prince, Singapore
SOAP—65 cs, American Express Co, President Adams, Marseilles
100 cs, F O De Luze, President Adams, Marseilles
16 cs, F R Arnold & Co, Ile de France, Havre
CASTILE—650 bgs, 29,920 lbs, J F Smith & Co, Providence, Marseilles
CLEANING—40 dms, Innis, Speiden & Co, American Trader, London
SODA CHLORATE—10 bbls, 2,424 lbs, E Suter & Co, Liberty, Havre
375 dms, 87,450 lbs, Monmouth Chemical Corp, Albert Ballin, Hamburg
CYANIDE—442 cans, Charles Hardy, Inc, Suffern, Havre
HYDROSULPHITE—40 dms, Ernest Ritter, Pennland, Antwerp
12 kegs, American Aniline Prod, Inc, Blydendijk, Rotterdam
NITRATE—205 bgs, R W Greef & Co, Oscar II, Oslo
1,540 bgs, Kuttroff, Pickhardt & Co, Maine, Greaker
6,621 bgs, Anglo-Chilean Nitrate Sales Corp, Santa Luisa, San Antonio
1,693 bgs, W R Grace & Co, Santa Luisa, Iquique
610 bgs, Kuttroff, Pickhardt & Co, Albert Ballin, Hamburg
PHOSPHATE—334 cks, 120,507 lbs, Roessler & Hasslacher Chemical Co, Eastern Dawn, Antwerp
PHOSPHATE DIBASIC—210 cks, Rhodia Chemical Co, Blydendijk, Rotterdam
PYROSULPHATE—250 dms, 116,600 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
SILICO FLUORIDE—50 cks, Harshaw, Fuller & Goodwin, Rotterdam, Rotterdam
SULPHIDE—102 dms, 47,159 lbs, A Klipstein & Co, Bellepline, Rotterdam
12 dms, Kuttroff, Pickhardt & Co, Rotterdam, Rotterdam
63 dms, F Rudloff, Brazil, Hamburg
1 cs, F Rudloff, Brazil, Hamburg
URANATE—50 dms, Belgo American Trading Corpn, Patagonier, Antwerp
SPONGES—21 bls, 2,100 lbs, F L Kramer & Co, Munorleans, Nassau
6 bls, 600 lbs, Gulf West Indies Co, Munorleans, Nassau
60 bls, 6,000 lbs, American Sponge & Chamois Co, Orizaba, Havana
25 bls, 2,500 lbs, J H Rhodes & Co, Minnewaska, London
2 bgs, J H Rhodes & Co, Minnewaska, London
4 cs, J H Rhodes & Co, Minnewaska, London
REFUSE—21 bls, 2,100 lbs, American Sponge & Chamois Co, Orizaba, Havana
SQUILLS—50 bgs, 11,000 lbs, S B Penick & Co, Inc, Alberta, Palermo
STARCH, POTATO—200 bgs, Jos Morningstar & Co, Oscar II, Oslo
RICE—60 cs, Orbis Products Trading Co, Patagonier, Antwerp
SOLUBLE—200 bgs, Jos Morningstar & Co, Oscar II, Oslo
50 bgs, Stein, Hall & Co, Oscar II, Oslo
TAPIOCA FLOUR—530 bgs, Java American Export Co, Silvermaple, Batavia
265 bgs, Java American Export Co, Silvermaple, Batavia
115 bgs, Archibald & Lewis Co, Silvermaple, Batavia
252 bgs, Arabol Mfg Co, Silvermaple, Batavia
505 bgs, Cafetea Importing Co, Lancaster Castle, Batavia
2,400 bgs, Java American Export Co, Lancaster Castle, Batavia
1,105 bgs, Stein, Hall & Co, Lancaster Castle, Batavia
2,527 bgs, Stein, Hall & Co, Lancaster Castle, Batavia
250 bgs, Jos Morningstar & Co, Lancaster Castle, Batavia
212 bgs, National City Bank, Lancaster Castle, Sourabaya
1,000 bgs, Balfour, Williamson & Co, Chinese Prince, Batavia
213 cs, Phila Gerard Natl Bank, Chinese Prince, Sourabaya
265 bgs, Arabol Mfg Co, Chinese Prince, Sourabaya
PEARL—672 bgs, Catz American Co, Silvermaple, Batavia
TARTAR, CRUDE—136 bgs, Chas Pfizer & Co, Alberta, Catania
THEOBROMINE—2 bbls, Maywood Chem Works, Rotterdam, Rotterdam
UMBER—5 cks, Whittaker, Clark & Daniels, Celtic, Liverpool
UREA—908 bgs, 199,760 lbs, Synthetic Nitrogen Products Co, Bellepline, Rotterdam
VALONEA—381 bgs, J A Barkey & Co, Saturnia, Trieste
VANILLIN—3 cs, Lo Curto & Funk, Minnewaska, London
3 cs, Lo Curto & Funk, Albert Ballin, Hamburg
VARNISH—3 cs, American Express Co, Suffern, Havre
2 cs, Schmidt, Pritchard Co, Suffern, Havre
VEGETABLE BLACK—50 cks, 9,020 lbs, R W Greef & Co, Eastern Dawn, Antwerp
WAX, ANIMAL—1 bg, A Hurst & Co, Orinoco, Hamburg
BEES—29 bgs, A Ricart, Huron, Azua
24 bgs, Selma Mercantile Corpn, Huron, Azua
41 bgs, Mecke & Co, Huron, Azua
6 bgs, A Ricart, Huron, Barahona
7 bgs, Schutte & Focke, Huron, Pt Plata
22 cakes, Porcella Vicini & Co, Huron, Pt Plata
4 bgs, Cordelera Com Co, Huron, Pt Plata
13 serroons, J J Julia & Co, Huron, Monte Cristi
5 bgs, E A B & Co, Mexico, Vera Cruz
34 bgs, Hensel, Bruckmann & Lorbacher, Cauto, Tampico
2 bgs, D Strengrafe, Carabobo, San Juan
39 bgs, R Desvernine, Orizaba, Havana
25 bgs, W A Foster & Co, Orizaba, Havana
15 bgs, A Ricart, San Lorenzo, St Domingo
48 pkgs, National Coml Bank, Brazil, Hamburg
15 cs, National Coml Bank, Brazil, Hamburg
84 bgs, National Coml Bank, Brazil, Hamburg
11 pkgs, National Bank of Com, President Adams, Alexandria
13 bgs, D Steengrafe, Ponce, Ponce
CANDELILLA—25 bgs, W Garretson, Cauto, Tampico
33 bgs, Banco Nac di Mexico, Cauto, Tampico
45 bgs, C W Jacob & Allison, Cauto, Tampico
WAX, CARNAUBA—391 bgs, C W Jacob & Allison, Ardenhall, Ceara
77 bgs, S P Drummond, Ardan, Ceara
168 bgs, S P Drummond, Ardenhall, Ceara
124 bgs, Strohmeyer & Arpe Co, Ardenhall, Ceara
300 bgs, F B Ross & Co, Ardenhall, Ceara
56 bgs, Grace Natl Bank, Ardenhall, Ceara
MONTAN—215 bgs, 33,440 lbs, Phoenix Shipping Co, Brazil, Hamburg
150 bgs, 16,812 lbs, John Monroe & Co, Brazil, Hamburg
200 bgs, 22,352 lbs, Strohmeyer & Arpe Co, Albert Ballin, Hamburg
OZOKERITE—27 bgs, Smith & Nichols, Albert Ballin, Hamburg
SPERMACETI—50 cs, consignees to follow, Transylvania, Glasgow
WHITING—450 bgs, A Klipstein & Co, Patagonier, Antwerp
1,000 bgs, Stanley Doggett, Inc, Eastern Dawn, Antwerp
WOOD FLOUR—1,000 bgs, 110,000 lbs, The Burnett Co, Bellepline, Rotterdam
420 bgs, State Chem Co, Rotterdam, Rotterdam
ZINC AMMONIUM CHLORIDE—120 cks, A Klipstein & Co, Pennland, Antwerp
CHLORIDE—73 cks, 35,217 lbs, Roessler & Hasslacher Chem Co, Bellepline, Rotterdam
OXIDE—8 bbls, Phillip Bros, Inc, Pennland, Antwerp
6 bgs, Phillip Bros, Inc, Pennland, Antwerp
20 cks, 9,768 lbs, A Klipstein & Co, Brazil, Hamburg
ZYKLON—353 cs, 40,777 lbs, Roessler & Hasslacher Chem Co, Brazil, Hamburg

Imports at New York in Transit

ACID, TARTARIC—10 bbls, 1,200 lbs, New York & Cuba Mail S S Co, Conte Grande, Genoa, Cuba
BEAN, COCOA—200 bgs, Pastores, Pt Limon, Hamburg
150 bgs, Pastores, Pt Limon, Havre
100 bgs, Silvermaple, Colombo, Vera Cruz
500 bgs, Munargo, Trinidad, Buenos Aires
286 bgs, Munargo, Trinidad, Melbourne
BENZOYL CHLORIDE—160 pkgs, 30,476 lbs, Brazil, Hamburg, Buffalo
BRONZE POWDER—14 pkgs, A C Rempert & Co, Columbus, Bremen, Chicago
5 cs, A C Rempert & Co, Columbus, Bremen, Chicago
35 dms, A C Rempert & Co, Collumbus, Bremen, Chicago
CAMPHOR, CRUDE—748 cs, Mitsui & Co, Takaoka, Keelung, Rochester
CHEMICAL—34 bbls, Brazil, Hamburg, St Louis
CINNAMON QUILLS—100 bls, 10,000 lbs, Dodwell & Co, Lancaster Castle, Colombo, Vera Cruz
CLAY, RAW—60 cks, President Harding, Bremenhaven, Wallaceburg
COCONUT—100 bgs, 10,000 lbs, Manaqui, Kingston, Hull
COPRA—975 bgs, 126,750 lbs, Manaqui, Kingston, Rotterdam
LIME JUICE—10 cks, Evans Sons, Leecher & Webb Ltd, Manaqui, Kingston, Liverpool
RAW—21 hhd, Dominica, Dominica, Wellington
LOGWOOD EXTRACT—80 cks, Manaqui, Kingston, Antwerp
40 cks, Manaqui, Kingston, Genoa
192 cks, Manaqui, Kingston, Glasgow
PIMENTO—200 bgs, 28,000 lbs, Barclay Bank, Manaqui, Kingston, Hamburg
ROOT, SARSAPARILLA—27 bls, Barclay Bank, Manaqui, Kingston, London
10 bls, Comayagua, Pt Cortes, Hamburg
SACCHARIN—2 cs, Monsanto Chem Works, Celtic, Liverpool, St Louis
SEED, CANARY—319 bgs, Voltaire, Buenos Aires, Vera Cruz
764 bgs, Sardinian Prince, Buenos Aires, Melbourne
80 bgs, Sardinian Prince, Buenos Aires, Santiago
200 bgs, Munargo, Buenos Aires, Havana
CARAWAY—350 bgs, Sokol & Co, Rotterdam, Rotterdam, Chicago
MUSTARD—105 bgs, Rotterdam, Rotterdam, Chicago
POPPY—360 bgs, Rotterdam, Rotterdam, Chicago
200 bgs, American Express Co, Rotterdam, Rotterdam, Milwaukee
SOAP, LIQUID—4 dms, W L Newberry, American Trader, London, Reading
SPONGES—45 bls, 4,500 lbs, Munorleans, Nassau, London
5 bls, 500 lbs, Orizaba, Havana, Spain
74 bls, 7,400 lbs, Orizaba, Havana, London
WASTE—5 bls, 500 lbs, Munorleans, Nassau, London
WAX, CANDELILLA—32 bgs, Canto, Tampico, London
35 bgs, Canto, Tampico, Glasgow

Imports at Baltimore

AMMONIA SULPHATE-NITRATE—182 bgs, 40,040 lbs, Synthetic Nitrogen Products Corp, Havelland, Hamburg
AMMONIAC SAL—100 cks, 62,480 lbs, Kuttroff, Pickhardt & Co, Bellepline, Rotterdam
BONE FLOUR—219 bgs, 44,117 lbs, Baltimore & Ohio Railroad, Havelland, Hamburg
MEAL—500 bgs, 99,711 lbs, Bellepline, Rotterdam
555 bgs, 110,744 lbs, Bradley & Baker, Bellepline, Rotterdam
1,623 bgs, 321,603 lbs, Bellepline, Rotterdam
250 bgs, 55,000 lbs, Bradley & Baker, Havelland, Hamburg
7,753 bgs, 13,844 cwt, Ralli Bros, West Loquaanuca, Karachi
BONE—499 bgs, 108,755 lbs, West Imboden, Buenos Aires
CHEMICALS—92 cks, 60,346 lbs, Roessler & Hasslacher Chemical Co, Bellepline, Rotterdam
1,000 bgs, 222,200 lbs, Roessler & Hasslacher Chemical Co, Bellepline, Rotterdam
143 bgs, 11,169 lbs, Bellepline, Rotterdam
226 cks, 152,390 lbs, Roessler & Hasslacher Chemical Co, Havelland, Hamburg
329 dms, 49,368 lbs, Havelland, Hamburg
CLAY—60 cks, 56,540 lbs, Bellepline, Rotterdam
CRYOLITE, SYNTHETIC—125 bbls, 60,500 lbs, M M Hardy, Inc, Bellepline, Rotterdam
EXTRACT, QUEBRACHO—1,264 bgs, 134,402 lbs, Tannin Corp, West Imboden, Buenos Aires
FERROMANGANESE—100 tons, Frank Samuels & Co, Manchester Shipper, Manchester
FERROPHOSPHORUS—224 cs, 117,044 lbs, International Mineral & Metals Corp, Waukegan, Dunkirk
FERTILIZER, NITROGENOUS—15 bgs, 2,330 lbs, Havelland, Hamburg
GLASS, SHEET—27 cs, 28,490 lbs, B A Herman & Co, Havelland, Hamburg
GREASE, WOOL—100 bbls, 46,668 lbs, Havelland, Hamburg
HORN MEAL—164 bgs, 33,037 lbs, Havelland, Hamburg
IRON ORE—11,000 tons, Bethlehem Steel Corp, Firmore, Daiquiri
20,000 tons, Bethlehem Steel Corp, Svealand, Cruz Grande
MANGANESE ORE—6,470 tons, Bethlehem Steel Corp, Janeta, Poti
MOLASSES—200,000 gls, Cuba Distilling Co, Carabulle, S Pedro Macoris
787,000 gls, Cuba Distilling Co, Carabulle, La Romana
400,000 gls, Cuba Distilling Co, Carabulle, Puerto Plata
1,350,000 gls, Cuba Distilling Co, Cassimir, Jucaro
OILMEAL, SOYA BEAN—6,400 bgs, 400 tons, Rukert Bros, Quaker City, Hull
PETROLEUM, CRUDE—85,000 bbls, Standard Oil Co, Beacon Street, Mamonal
75,000 bbls, Standard Oil Co, Malabar, Tampico
53,332 bbls, Venezuela Oil Co, Dartford, Las Pedras
POTASH CARBONATE—174 cks, 120,263 lbs, Parsons & Petit, Havelland, Hamburg
KAINIT, 12.4%—1,597,200 lbs, Rukert Bros, Havelland, Hamburg
400,400 lbs, Standard Wholesale Phosphate Co, Pennsylvania, Nordenham
MANURE SALT, 20%—801,900 lbs, Rukert Bros, Havelland, Hamburg
2,200,000 lbs, Standard Wholesale Phosphate Co, Pennsylvania, Nordenham
2,037,200 lbs, American Agricultural Chemical Co, Drachenfels, Nordenham
MANURE SALT, 30%—4,290,000 lbs, Standard Wholesale Phosphate Co, Pennsylvania, Nordenham
4,642,000 lbs, American Agricultural Chemical Co, Drachenfels, Nordenham
3,192,200 lbs, F S Royster Guano Co, Drachenfels, Nordenham
MURIATE—4,500 bgs, 904,266 lbs, Rukert Bros, Havelland, Hamburg
MURIATE, 78.81%—3,993,000 lbs, Rukert Bros, Pennsylvania, Nordenham
MURIATE, 80-85%—998,800 lbs, Standard Wholesale Phosphate Co, Pennsylvania, Nordenham
3,196,820 lbs, American Agricultural Chemical Co, Drachenfels, Nordenham
1,595,220 lbs, F S Royster Guano Co, Drachenfels, Nordenham
MURIATE, 90%—7,834,200 lbs, American Agricultural Chemical Co, Drachenfels, Nordenham
SALT CAKE—421,190 lbs, A Klipstein & Co, Inc, Bellepline, Rotterdam
SEED, CANARY—500 bgs, 72,710 lbs, West Imboden, Buenos Aires
MUSTARD—300 sacks, 30 tons, McCormick & Co, Quaker City, Hull
SUNFLOWER—200 bgs, 18,724 lbs, West Imboden, Buenos Aires
SODA NITRATE—1,500 bgs, Wessel, Duval & Co, Birk, Antofagasta
10,146 bgs, 1,100 tons, Wessel, Duval & Co, Birk, Caleta Colosa
305 cks, 184,109 lbs, Kuttroff, Pickhardt & Co, Havelland, Hamburg

Imports at Baton Rouge

PETROLEUM, CRUDE—53,000 bbls, Standard Oil Co, Glenpool, Tampico

Imports at Boston

CASEIN—449 scks, Norwegian, London
CASSIA BUDS—50 cs, Stickney & Poor Spice Co, Chinese Prince, Hongkong
CHALK, BLOCK—5,000 tons, S Instone & Co, Molesey, Boulogne
CHEMICALS—280 bgs, Brown Bros, London Merchant, Glasgow
CLAY, CHINA—190 bbls, Devonian, Liverpool
COCONUT, DESIC—100 cs, 13,000 lbs, Silvermaple, Colombo
COLOR, ALIZARIN, PASTE—3 cks, Dyestuffs Corpn of America, Devonian, Liverpool
ANILINE—3 kgs, 2 cks, 2 cs, Dyestuffs Corpn of America, Devonian, Liverpool
CUTCH—40 bxs, London Merchant, Liverpool
DRUGGISTS' SUNDRIES—2 cs, Norwegian, London
EARTH, FULLER'S—200 bgs, L A Salomon & Bro, Norwegian, London
EXTRACTS—5 cs, Gustav Martin, London Merchant, Glasgow
FERTILIZER, NITROGENOUS—534 bgs, 110,206 lbs, N J Baker, Coahoma County, Antwerp
FLOWERS, INSECT—8 bls, Alberta, Cruz
GLASS, PLATE—20 cs, 25,031 lbs, Coahoma County, Antwerp
14 cs, 44,531 lbs, Marks Bros, Coahoma County, Antwerp
WINDOW—85 cs, 13,691 lbs, Semon Bache Co, Coahoma County, Antwerp
2,008 cs, 187,472 lbs, Coahoma County, Antwerp
145 cs, 11,038 lbs, Pittsburgh Plate Glass Co, Coahoma County, Antwerp
1,846 cs, 147,014 lbs, Ferguson Co, Coahoma County, Antwerp
2,750 cs, 201,765 lbs, Coahoma County, Antwerp
1,763 cs, 118,200 lbs, Wheeler Meserve Glass Co, Coahoma County, Antwerp
GLUE—200 bgs, Alberta, Trieste
GLUESTOCK, FISH BONES, FINS, AND SKINS—84 bgs, Russia Cement Co, Prince George, Yarmouth
FISH HEADS—6 bbls, J A Rich, Yarmouth, Yarmouth
FISH SCRAP—3 bbls, J K Dennis, Yarmouth, Yarmouth
1 bbl, J P Field, Yarmouth, Yarmouth
2 bbls, J P Field, Prince George, Yarmouth
31 bgs, 8 bbls, Russia Cement Co, Yarmouth, Yarmouth
15 bxs, 2 bbls, J P Field, Yarmouth, Yarmouth
FISH SKINS—2 bbls, E A Malone, Yarmouth, Yarmouth
93 bgs, Russia Cement Co, Prince George, Yarmouth
7 bgs, Gorton Pew Fisheries, Farnorth, North Sydney
HIDE CUTTINGS—233 bgs, Baring Bros, Devonian, Liverpool
1,244 bgs, 32 bls, 43 tons, 13 cwt, 25 lbs, J B Moors Co, 9Bellflower, Liverpool
GREASE—80 bbls, J S Bent Co, Norwegian, London
GUM, HASHAB—100 bgs, 22,487 lbs, Maihar, Port Sudan
INDIGO, GROUND—5 cks, American Express Co, Norwegian, London
INK, PRINTING—2 cs, H O Houghton Co, Norwegian, London
LIME JUICE—65 cs, S S Pierce Co, Devonian, Liverpool
LITHOPONE—25 cks, 15,157 lbs, African Metals Corpn, Coahoma County, Antwerp
MEDICINAL PREPS—4 cs, United Drug Co, Devonian, Liverpool
2 cs, American Express Co, Bellflower, Liverpool
MYROBALANS, WHOLE—1,000 pockets, Maihar, Calcutta
OIL, COCONUT—986 tons, bulk, 2,210,342 lbs, Philippine Refining Corpn, Silvermaple, Opon
COD—333 cks, Marden Wild Corpn, Farnorth, Halifax
100 bbls, London Merchant, Glasgow
DIPPED—4 cks, Marden Wild Corpn, Farnorth, Halifax
OIL, LUBRICATING—15 dms, 7,117 lbs, Coahoma County, Antwerp
PRESSED—8 cks, Marden Wild Corpn, Farnorth, Halifax
SEAL—11 cks, Marden Wild Corpn, Farnorth, Halifax
SPERM—60 bbls, London Merchant, Glasgow
WHALE—75 cks, C H Powell Co, Farnorth, St Johns
PETROLEUM, CRUDE—70,728 bbls, Pan-American Petroleum Corpn, S M Spalding, Aruba
81,697 bbls, Cities Service Refining Co, Hagood, Las Piedras, Venezuela
PITCH—8 bbls, 11 crts, L W Ferdinand Co, Norwegian, London
SHELLAC—20 chts, 100 bgs, Rogers Pyatt Shellac Co, Maihar, Calcutta
181 chts, Maihar, Calcutta
BUTTONLAC—50 chts, Rogers Pyatt Shellac Co, Maihar, Calcutta
SEEDLAC—500 bgs, E S Parks Shellac Co, Maihar, Calcutta
175 bgs, Rogers Pyatt Shellac Co, Maihar, Calcutta
675 bgs, Maihar, Calcutta
SLAG, BASIC—1,120 bgs, 223,961 lbs, Coahoma County, Antwerp
SODA ACETATE—50 cskg, 35,825 lbs, Kuttroff, Pickhardt Co, Coahoma County, Rotterdam
CYANIDE—100 dms, Devonian, Liverpool
SUMAC, GROUND—350 bgs, 55,942 lbs, Alberta, Palermo
TALC—100 bgs, 22,046 lbs, L A Salomon & Bro, Denmark Maru, Genoa
TAPIOCA FLOUR—1,000 bgs, Balfour Williamson Co, Silvermaple, Batavia
250 bgs, Catz American Co, Silvermaple, Batavia
699 bgs, First National Bank, Chinese Prince, Batavia
539 bgs, Chinese Prince, Sourabaya
250 bgs, Arnold Hoffman Co, Silvermaple, Batavia
TOLIET PREPS—1 bx, J P Marston Co, London Merchant, Liverpool
TRAGASOL—150 bbls, J P Marston, Devonian, Liverpool
75 bbls, J P Marston, London Merchant, Liverpool
WATER, MINERAL—150 cs, 33,763 lbs, S S Pierce Co, Coahoma County, Antwerp
50 cs, S S Pierce Co, Norwegian, London
WHITING—3,000 bgs, 350,690 lbs, T D Downing, Coahoma County, Antwerp

Imports at Boston in Transit

FERTILIZER, LEATHER SCRAP—7 bls, 1 ton, 6 cwt, 2 qrs, 9 lbs, Belleflower, Liverpool
GLASS, WINDOW—2,596 cs, 204,578 lbs, Tabbit, Brooks & Ayer, Coahoma County, Antwerp, for Portland, Me
TAPIOCA, PEARL—173 bgs, Canadian Bank of Commerce, Silvermaple, Batavia, for Montreal
SEED—58 bgs, Canadian Bank of Commerce, Silvermaple, Batavia, for Montreal

Imports at Galveston

CREOSOTE—4,198 tons, Manatawny, Amsterdam
2,161 tons, Manatawny, Grangermouth

Imports at Gloucester

OIL, COD—2 bbls, Gorton Pew Fisheries Co, Radio 11, Tiverton

Imports at Houston

ALUMINUM POWDER—5 cs, Rio Bravo, Hamburg
BRONZE POWDER—2 cs, Rio Bravo, Hamburg
COLORS—1 cs, Rio Bravo, Hamburg
GREASE, WOOL—30 cks, Middleham Castle, Antwerp
POLISH, METAL—132 cs, Rio Bravo, Hamburg
TALC—200 bgs, Rio Bravo, Hamburg
WEED KILLER—3 cs, Middleham Castle, Antwerp

Imports at Los Angeles

CALCIUM CHLORIDE—183 dms, 123,837 lbs, Mefford Chemical Co, Emil Kirdorf, Hamburg
1,816 bgs, 176 tons, Wilson & George Meyer, Emil Kirdorf, Berlin
FERROPHOSPHOIUS—107 cs, 25 tons, Balfour, Guthrie Co, Emil Kirdorf, Zurich
FERTILIZER, BONE—1,681 bgs, 168 tons, A P Bartlett & Co, Emil Kirdorf, Wien
BONE MEAL—200 bgs, 11 tons, W R McLeod & Co, Emil Kirdorf, Antwerp
508 bgs, 56 tons, W R McLeod & Co, Emil Kirdorf, Paris
COCOA WASTE—670 bgs, 25 tons, A P Bartlett & Co, Emil Kirdorf, Hamburg
HORN MEAL—336 bgs, 30 tons, United By-Products Co, Portland, Hamburg
TANKAGE—1,543 bgs, 98 tons, Krumm Mfg Co, Hardanger, Buenos Aires
GUM, COPAL—81 bskts, 11,572 lbs, Fulghum & Co, Inc, President Lincoln, Macassar
IRON CHLORIDE—40 cs, 4,409 lbs, Braun Corpn, Emil Kirdorf, Hamburg
OIL, RAPESEED—250 dms, 13,283 gls, Globe Milling Co, Siberia, Kobe
OILMEAL, COPRA—1,680 sx, 16,942 lbs, S F Milling Co, President Lincoln, Manila
1,680 sx, 76 tons, Sperry Flour Co, President Lincoln, Manila
500 bgs, 51,800 lbs, Pacific Trading Co, Atlantic, Yokohama
HEMPSEED—2,500 bgs, 250,000 lbs, Tarr & McComb, Atlantic, Nagoya
2,000 bgs, 100 tons, S F Milling Co, Atlantic, Nagoya
LINSEED—1,000 bgs, 200,000 lbs, Atlas Milling Co, Atlantic, Kobe
1,500 bgs, 50 tons, S F Milling Co, Atlantic, Kobe
SOYA BEAN—1,000 bgs, 500 tons, Atlas Mill Co, Golden Mountain, Dairen
2,600 bgs, 130 tons, S F Mill Co, Atlantic, Kobe
2,000 bgs, 200,000 lbs, S F Mill Co, Golden Mountain, Dairen
3,600 bgs, 180 tons, Balfour, Guthrie Co, Golden Mountain, Dairen
2,000 sx, 200,000 lbs, Albers Mill Co, Golden Mountain, Dairen
2,000 bgs, 100 tons, Dairymen's Feed & Supply Co, Golden Mountain, Dairen
212 bgs, 14 tons, S F Mill Co, Golden Mountain, Dairen
POTASH CARBONATE—17 cks, 11,149 lbs, Braun Corpn, Emil Kirdorf, Hamburg
MURIATE—150 bgs, 16 tons, Wilson & George Meyer Co, Emil Kirdorf, Hamburg
SALTPETER—15 cks, 3,882 lbs, Braun Corpn, Emil Kirdorf, Hamburg
SHELLAC—50 bgs, 8,200 lbs, L H Butcher Co, President Lincoln, Calcutta
SODA NITRATE—7,225 bgs, 705,528 lbs, W R Grace & Co, Coyes, Chile
91 cks, 26 tons, Stauffer Chemical Co, Emil Kirdorf, Berlin
ZINC CHLORIDE—30 dms, 11,400 lbs, Mefford Chemical Co, Emil Kirdorf, Hamburg

Current Prices are now printed in connection with the Market Reports. See index, page 2.

Imports at Mobile

IRON ORE—5,200 tons, Portvale, Bona
MILK POWDER—10 bbls, Florence Luckenbach, Bellingham

Imports at New Orleans

BAUXITE ORE—2,571 tons, Republic Mining & Manufacturing Co, Sneland I, Paramaribo
2,002 tons, Republic Mining & Manufacturing Co, William, Georgetown
CASEIN—250 bgs, National Bank of Boston, Santos, Buenos Aires
EXTRACT, QUEBRACHO—100 bgs, Whitney Central National Bank, Santos, Buenos Aires
GASOLINE—4,500 bbls, Mexican Petroleum Corpn, Cometa, Tampico
MOLASSES—1,179,542 gls, American Sugar Refining Co, Dixiano, Puerto Tarafa
1,585,000 gls, Athelbeach, Sagua
280,354 gls, Canal Bank & Trust Co, Castana, Niquero
734,166 gls, Canal Bank & Trust Co, Castana, Guantanamo
543,073 gls, Dunbar Molasses Co, Castana, Matanzas
1,330,566 gls, Kentucky Alcohol Corpn, Dora, Antilla
286,532 gls, Kentucky Alcohol Corpn, Dora, Havana
PETROLEUM, CRUDE—53,000 bbls, N O Refining Co, Princeton, Port Arthur
18,000 bbls, Mexican Petroleum Corpn, Cometa, Tampico
63,000 bbls, Mexican Petroleum Corpn, C A Canfield, Tampico
ROSIN—211 bbls, Bragmans Bluff Lumber Co, Jose, Puerto Cabezas
SPONGES—10 bls, H D Helm & Co, Parismina, Havana
TANKAGE—1,985 bgs, Armour & Co, Santos, Buenos Aires
4,188 bgs, Santos, Buenos Aires

Imports at Norfolk

BLOOD, DRIED—1,409 bgs, 152 lbs, H J Baker & Bro, West Selene, Buenos Aires
EXTRACT, QUEBRACHO—12,682 bgs, 608 tons, The Tannin Corpn, West Selene, Buenos Aires
FERTILIZER, FUR WASTE—230 bls, 131,594 lbs, Lehigh ,London
LEATHER SCRAP—594 bls, 46,732 lbs, New York Trust Co, Lehigh, London
1 parcel, New York Trust Co, Hannover, Hamburg
1 parcel, New York Trust Co, Hannover, Bremen
3,514 bgs, Western Ally, Rotterdam
GLASS, PLATE—23 cs, French-American Banking Corpn, Sac City, Antwerp
18 cs, Sac City, Antwerp
WINDOW—400 cs, Sac City, Antwerp
PETROLEUM, CRUDE—20,000 bbls, The Texas Co, Dungannon, Tampico
POTASH, KAINIT, 12.4%—91 tons, bulk, N V Potash Export My, Exeter City, Antwerp
MANURE SALT, 20%—1,576 tons, bulk, N V Potash Export My, Exeter City, Antwerp
1,685 tons, bulk, N V Potash Export My, Elias Kremmer, Hamburg
1,161 tons, bulk, N V Potash Export My, Schoenfels, Nordenham
MANURE SALT, 30%—1,785 tons, bulk, N V Potash Export My, Schoenfels, Nordenham
4,412 tons, bulk, N V Potash Export My, Elias Kremmer, Hamburg
1,063 tons, bulk, N V Potash Export My, Exeter City, Antwerp
POTASH-MAGNESIA SULPHATE—500 bgs, 45 tons, N V Potash Export My, Elias Kremmer, Hamburg
2,500 bgs, 225 tons, N V Potash Export My, Schoenfels, Nordenham
MURIATE, 80-85%—1,300 tons, bulk, N V Potash Export My, Exeter City, Antwerp
500 bgs, 44 tons, N V Potash Export My, Exeter City, Antwerp
SLAG, BASIC—200 bgs, Sac City, Antwerp
SODA SULPHIDE—50 dms, 18 tons, Chas H Stone, Sac City, Antwerp

Imports at Philadelphia

AMMONIAC, SAL—271 cks, Kuttroff, Pickhardt Co, Mercer, Rotterdam
20 cks, Mercer, Rotterdam
BENZIN, CRUDE—2 dms, H A Safer, Turpin, Bremen
BENZOL—1 cs, Baltimore & Ohio Railroad, London Mariner, London
CHALK, BLOCK—500 tons, Brown Bros & Co, London Mariner, London
CHROME ORE—3,500 tons, Coatsworth, Pastelillo
CLAY—1,430,000 lbs, Turpin, Bremen
BALL—790 tons, 21 cwt, Sedgepool, Fowey
BLUE—202 tons, 1 cwt, Sedgepool, Fowey
CHINA—4,967 tons, 63 cwt, Sedgepool, Fowey
CHINA, GROUND—71 tons, 1 cwt, Sedgepool, Fowey
RAW—50 cks, Adolphe Hurst & Co, Mercer, Rotterdam
CORK, DISCS—240 bls, Crown Cork Co, Ossa, Seville
SHAVINGS—657 bls, Crown Cork Co, Ossa, Seville
WASTE—1,125 bls, Pennsylvania Trading Co, Ossa, Casablanca
FERTILIZER, NITROGENOUS—1,101 bgs, Turpin, Bremen
IRON ORE—805,200 lbs, Bank of America, Mercer, Rotterdam
OIL, OLIVE—100 bbls, Seaboard National Bank, Isarco, Messina
25 dms, Philadelphia National Bank, Ossa, Seville
PETROLEUM, CRUDE—75,000 bbls, in bulk, Gulf Refining Co, Gulftrade, Las Piedras
75,787 bbls, in bulk, Atlantic Refining Co, Clemen Smith, Las Piedras
35 dms, H A Saffer, Turpin, Bremen
55,500 bbls, in bulk, Atlantic Refining Co, Madrono, Tuxpan
78,000 bbls, in bulk, Gulf Refining Co, Cecil County, Las Piedras
115,000 bbls, Gulf Refining Co, Garfield, Las Piedras
POTASH, CAUSTIC—40 dms, Brown Bros & Co, Turpin, Hamburg
SHELLAC—46 bgs, City of Kobe, Madras
SODA SULPHIDE—250 dms, Mercer, Rotterdam
ZINC SULPHATE—78 cks, Mercer, Rotterdam

Imports at San Francisco

ACID, CRESYLIC—300 cks, American Cyanide Sales Co, Glamorganshire, Rotterdam
AGAR AGAR—20 bls, T M Duche & Sons, Hoyeisan, Kobe
10 bls, Wood & Selick, Inc, Hoyeisan, Kobe
5 bbls, Stanley Jordan & Co, Inc, Hoyeisan, Kobe
25 bls, National City Bank of N Y, Atlantic, Kobe
10 bls, McKesson & Robbins, Inc, Akagisan, Kobe
10 bls, Burr & Palmer, Akagisan, Kobe
ALUM, POTASH, LUMP—100 cs, Philadelphia Quartz Co of Calif, Hoyeisan, Kobe
ALUMINA HYDRATE—10 cks, Tongking, Hamburg
ARSENIC—20 cks, Roessler & Hasslacher Chemical Co, Tongking, Hamburg
CRUDE—718 cs, Atlantic, Yokohama
BEANS, COCOA—100 bgs, Abel P Santos, Limon, Cristobal
500 bgs, San Mateo, Cristobal
1,200 bgs, Fruit Dispatch Co, San Mateo, Cristobal
BLEACHING POWDER—80 dms, Wilson & George Meyer & Co, Portland, Hamburg
BONE MEAL—2,000 bgs, Wilson & George Meyer & Co, Lippe, Hamburg
BONES, GLUE—1 lot in bulk, Swift & Co, Hardanger, Buenos Aires
CALCIUM CHLORATE—500 cs, American Exchange National Bank, Lippe, Hamburg
CAMPHOR, REFD—200 cs, Mitsui & Co, Ltd, Hoyeisan, Kobe
50 cs, Arthur G Cailler, Akagisan, Kobe
CASEIN—417 bgs, Hardanger, Buenos Aires
CASSIA—200 bls, McCormick & Co, Inc, Takaoka, Canton
CHEMICALS—6 cs, Braun-Knecht-Heimann Co, Portland, Hamburg
20 hampers, Braun-Knecht-Heimann Co, Portland, Hamburg
15 cks, Braun-Knecht-Heimann Co, Portland, Hamburg
110 dms, Anglo & London-Paris National Bank, Portland, Antwerp
COLORS—2 cs, Rabjohn's Artists' Supply Shop, Lippe, Hamburg
COPRA—63,788 lbs, Vegetable Oil Corp, Michigan, Davao
154,485 lbs, El Dorado Oil Works, Michigan, Davao
240 long tons, Best Foods, Inc, Michigan, Cebu
160 long tons, El Dorado Oil Works, Michigan, Cebu
491.3 long tons, El Dorado Oil Works, Michigan, Legaspi
921.23 long tons, El Dorado Oil Works, Michigan, Tabaco
GLASS, PLATE—51 cs, Brown Bros, Glamorganshire, Rotterdam
30 cs, French American Banking Corp, Glamorganshire, Rotterdam
ROUGH—8 cs, Lazard Bros, Portland, Hamburg
WINDOW—9 cs, Goodman & Paige, Portland, Hamburg
2 cs, Eugene Tiche, Portland, Hamburg
12 cs, Pacific President, Manchester
GLUE, GELATIN, POWD—15 bbls, Paramount Food Products Corp, Glamorganshire, Rotterdam
GREASE, WOOL—75 bbls, Lippe, Bremen
HERBS—10 cs, Nature's Herb Co, Portland, Hamburg
2 bls, Nature's Herb Co, Portland, Hamburg
LIME—1,000 bbls, Horton Lime Co, Rochelle, Blubber Bay
600 bgs, Horton Lime Co, Rochelle, Blubber Bay
MENTHOL CRYSTALS—50 cs, National City Bank of N Y, Atlantic, Yokohama
OIL, CAMPHOR, BROWN—100 dms, New York Trust Co, Atlantic, Kobe
CHINAWOOD—450 dms, Pacific National Bank, Siberia, Hongkong
644 long tons, Werner G Smith Co, Takaoka, Hongkong
COCONUT—562.78 long tons, Philippine Refining Corp, Michigan, Manila
PERILLA—350 dms, S L Jones & Co, Siberia, Kobe
RAPESEED—150 dms, Pacific Vegetable Oil Co, Siberia, Kobe
150 dms, Mitsui & Co, Ltd, Hoyeisan, Kobe
SOYA BEAN—159 bbls, Balfour, Guthrie & Co, Golden Mountain, Dairen
OILMEAL, FISH—915 bgs, Wilbur-Ellis Co, Rochelle, Guatsino
4,119 bgs, James Farrel & Co, Rochelle, Nootka
900 bgs, James Farrel & Co, Rochelle, Hecate
6,120 bgs, Wilbur-Ellis Co, Rochelle, Hecate
LINSEED—2,000 bgs, Balfour, Guthrie & Co, Siberia, Kobe
6,000 bgs, Pacific National Bank, Atlantic, Kobe
1,000 bgs, S L Jones & Co, Hoyeisan, Kobe
POLISH, METAL—4 cs, Portland, Hamburg
POTASH, CAUSTIC—163 dms, Tongking, Hamburg
QUEBRACHO EXTRACT—420 bgs, International Products Corp, Hardanger, Buenos Aires
SEED, CARAWAY—50 bgs, Glamorganshire, Rotterdam
POPPY, BLUE—50 bgs, Glamorganshire, Rotterdam
RAPE—175 bgs, Pacific President, Manchester
SHELLAC—50 bls, Michigan, Hongkong
SOAP—2 cs, Fred Mirsky, Balboa, Gothenburg
SODA CHLORATE—250 dms, Seaboard National Bank, Portland, Hamburg
NITRATE—10,150 bgs, W R Grace & Co, Coya, Taltal
6,373 bgs, W R Grace & Co, Coya, Tocopilla
355 bgs, Balfour, Guthrie & Co, Coya, Tocopilla
STARCH—10 bgs, Ishimitsu & Co, Akagisan, Kobe
TALLOW—43 bbls, Golden Coast, Auckland
13 cks, Golden Coast, Auckland
41 bbls, Golden Coast, Wellington
17 cks, Golden Coast, Wellington
TANKAGE—1,120 bgs, Golden Coast, Lyttleton
TAPIOCA, PEARL—250 bgs, H M Newhall & Co, Siberia, Penang
TAR—50 bbls, Lippe, Hamburg
UMBER—79 cks, L H Butcher & Co, Pacific President, Manchester
WAX, JAPAN VEGETABLE—50 cs, A Klipstein & Co, Hoyesian, Kobe
100 cs, National City Bank of N Y, Atlantic, Kobe
125 cs, Mitsui & Co, Ltd, Akagisan, Kobe

Imports at Seattle

BRUSHES—4 cs, 480 lbs, F Morrison Co, Shidzuoka, Kobe
4 cs, 480 lbs, W J Byrnes Co, President Cleveland, Kobe
3 cs, 360 lbs, Langsdorf & Co, President Cleveland, Kobe
1 cs, 120 lbs, Strauss Bros, President Cleveland, Kobe
2 cs, 240 lbs, G Gibsen Co, President Cleveland, Kobe
42 cs, 5,040 lbs, F P Dow & Co, President Cleveland, Kobe
1 cs, 120 lbs (New York), President Cleveland, Kobe
12 cs, 1,440 lbs, United Drug Co, President Cleveland, Kobe
27 cs, 3,240 lbs, G Thomsen & Co, President Cleveland, Kobe
7 cs, 840 lbs, J Monroe & Co, President Cleveland, Kobe
6 cs, 720 lbs, Gussoni Smith Corpn, President Cleveland, Kobe
CHILLIES—448 bgs, Pacific Export Co, President Cleveland, Shanghai
COCONUT, DESIC—400 cs, G & Pratt Co, President Cleveland, Manila
705 cs, American Commerce Co, President Cleveland, Manila
MEDICINAL PREPS—6 cs, Mar Dong Co, President Cleveland, Shanghai
OIL, CHINAWOOD—300 tons, H & Knapp, President Cleveland, Shanghai
SODA NITRATE—2,000 bgs, W R Grace & Co, Cacique, Jatal
WATER, MINERAL—10 cs, Shidzuoka, Kobe

Shipments Between Domestic Ports

Beaumont Domestic Shipments

GREASE, LUBRICATING—20 bbls, 15 cs, Point Gorda, San Francisco
861 dms, 880 cs, Point Gorda, Oakland
761 dms, 880 cs, Point Gorda, Los Angeles
762 dms, 880 cs, Point Gorda, Seattle
OIL, LUBRICATING—402 dms, 705 cs, Point Gorda, Oakland
65 dms, 20 cs, Point Gorda, San Francisco
462 dms, 695 cs, Point Gorda, Los Angeles
402 dms, 700 cs, Point Gorda, Seattle
PETROLEUM, CRUDE—77,000 bbls, Samuel Q Brown, New York
WAX DRESSING—30 dms, 50 cs, Point Gorda, Oakland
30 dms, Point Gorda, Seattle

Galveston Domestic Shipments

EARTH—3,500 bgs, El Coston, New York
2,500 bgs, El Dia, New York
2,400 bgs, El Norte, New York
FERTILIZER, BONE MEAL—1,000 sx, El Isleo, Baltimore
OILMEAL, COTTONSEED—800 sx, El Coston, New York
800 sx, El Dia, New York
ROSIN—200 dms, El Dia, New York
80 bbls, Brazos, New York
160 bbls, El Norte, New York
SALT—3,000 sx, El Isleo, Baltimore
SULPHUR—500 tons, J R Gordon, San Francisco
2,000 tons, J R Gordon, Portland-Vancouver

Houston Domestic Shipments

FERTILIZER, BONE MEAL—600 sx, Florence Luckenbach, Los Angeles
500 sx, Florence Luckenbach, Portland
GASOLINE—91,000 bbls, W H Libby, New York
81,000 bbls, S B Hunt, New York
LARD SUBSTITUTE—70 trcs, Florence Luckenbach, San Francisco
185 trcs, 700 cs, Florence Luckenbach, Portland
OIL, COTTONSEED—150 cs, Florence Luckenbach, Los Angeles
186 dms, Florence Luckenbach, Seattle
100 dms, Florence Luckenbach, San Francisco
80 dms, Florence Luckenbach, Portland
GAS—59,000 bbls, Glenpool, New York
LUBRICATING—65 dms, Florence Luckenbach, Seattle
PETROLEUM, CRUDE—27,000 bbls, Muskogee, New York
77,000 bbls, Herbert L Pratt, Philadelphia
23,000 bbls, Imlay, New York

Los Angeles Domestic Shipments

GASOLINE—6,304 bbls, S & C Barge No 41, San Diego
35,631 bbls, Solitaire, San Francisco
5,206 bbls, S & C Barge No. 2, San Diego
80,302 bbls, S C T Dodd, Point Wells
21,391 bbls, Kekoskee, Oakland
GASOLINE—7,593 bbls, Lebec, Portland
11,790 bbls, Radiant, San Diego
15,079 bbls, Lake Miraflores, San Francisco
76,485 bbls, Lubrico, Portland
74,555 bbls, Aladdin, Baltimore
115,000 bbls, Sun, Philadelphia
80,313 bbls, Francis E Powell, Philadelphia
96,170 bbls, Broad Arrow, New York
77,660 bbls, Larry Doheny, Baltimore
KEROSENE—1,280 bbls, S & C Barge No. 41, San Diego
94,546 bbls, Japan Arrow, Providence
OIL, FUEL—72,951 bbls, Tejon, Portland
99,638 bbls, Neches, San Diego
54,764 bbls, Kanawha, Bremerton
46,418 bbls, Capt A F Lucas, Willbridge
74,022 bbls, W S Miller, Portland
65,334 bbls, J C Fitzsimmons, Point Wells
33,400 bbls, Kekoskee, Oakland
45,978 bbls, Lebec, Portland
8,950 bbls, Radiant, San Diego
32,465 bbls, El Segundo, San Diego
12,173 bbls, El Cedro, Seattle
GAS—70,602 bbls, Algonquin, New York
ROAD—13,755 bbls, Lebec, Portland
PETROLEUM, CRUDE—74,655 bbls, District of Columbia, Richmond
77,842 bbls, Cathwood, Martinez
104,000 bbls, H M Storey, Richmond
65,000 bbls, Richmond, Richmond
79,506 bbls, David McHelvy, Avon
82,291 bbls, Halo, Philadelphia

New Orleans Domestic Shipments

ASPHALT—350 bgs, Dixie, New York
BLACK, BONE—350 sx, Dixie, New York
CARBON—500 cs, Dixie, New York
EARTH—36 tons, Dixie, New York
MOLASSES—850 cs, El Capitan, New York
OIL, PINE—12 tons, Point Bonita, San Francisco
SALAD—15 tons, Point Bonita, San Francisco
PITCH—15 bbls, Dixie, New York
ROSIN—400 bbls, Dixie, New York
330 bbls, El Capitan, New York
SALT—1,500 sx, El Capitan, New York
TAR, PITCH—23 tons, Point Bonita, Los Angeles
TURPENTINE—12 tons, Point Bonita, Los Angeles
12 tons, Point Bonita, Los Angeles
WATER, MINERAL—140 dms, El Capitan, New York

Port Arthur Domestic Shipments

PETROLEUM, CRUDE—72,000 bbls, Edward L Shea, New York
53,000 bbls, Princeton, Good Hope

Texas City Domestic Shipments

PETROLEUM, CRUDE—17,000 bbls, Christy Payne, Baltimore
114,000 bbls, E M Clark, Everett
118,000 bbls, W C Teagle, New York
20,000 bbls, Caddo, Baltimore

Recent Exports from U. S. Ports

Exports from New York

ACETONE—101,948 lbs, London Corporation, London
ACID, CITRIC—2,282 lbs, Cedarbank, Manila
MURIATIC—1,281 lbs, Santa Elisa, Callao
13,886 lbs, M C Holm, Havana
NITRIC—574 lbs, Cedarbank, Manila
1,092 lbs, Santa Elisa, Callao
OLEIC—4,081 lbs, Havana, Mexico City
PYROGALLIC—70 lbs, Mexico, Vera Cruz
SALICYLIC—984 lbs, Havana, Vera Cruz
SULPHURIC—1,243 lbs, Cedarbank, Manila
1,220 lbs, Astrea, Cape Haitien
620 lbs, Maraval, Trinidad
TARTARIC—1,480 lbs, Venezuela, Medellin
ALUMINUM POWDER—8,080 lbs, George Wasnington, Hamburg
ALCOHOL, BUTYL—8,690 gls, London Corporation, London
AMMONIA, ANHYDROUS—7,285 lbs, Lara, Maracaibo
15,734 lbs, Miraflores, Manzanillo
CARBONATE—2,350 lbs, President Van Buren, Manila
PHOSPHATE—22,736 lbs, Knight Companion, Cheribon
113,680 lbs, Knight Companion, Belawan
110,520 lbs, Knight Companion, Padang
548,400 lbs, Knight Companion, Batavia
SULPHATE—111,250 lbs, Lara, San Juan
34,600 lbs, City of Batavia, Auckland
784,050 lbs, Toledo, Hongkong
ASPHALT—9,460 lbs, City of Eastbourne, Singapore
84,472 lbs, City of Batavia, Auckland
85,110 lbs, City of Batavia, Dunedin
175,000 lbs, City of Batavia, Lyttleton
3,307 lbs, Ulua, Buenaventura
26,310 lbs, Chifuku, Hamburg
1,300,756 lbs, Brazil, Hamburg
45,072 lbs, Gustavsholm, Stockholm
23,438 lbs, Santa Elisa, Valparaiso
13,576 lbs, Santa Elisa, Santiago
24,161 lbs, West Carnifax, Constantinople
962,713 lbs, Tagliamento, Genoa
101,626 lbs, London Corporation, London
181,475 lbs, Toledo, Shanghai
4,560 lbs, Knight Companion, Surabaya
BINDER—231,838 lbs, Tagliamento, Genoa
232,414 lbs, Tagliamento, Leghorn
FLUX—20,205 lbs, City of Batavia, Dunedin
41,082 lbs, City of Batavia, Wellington
40,865 lbs, City of Batavia, Lyttleton
12,840 lbs, Sandown Castle East London
SOLID—48,315 lbs, Chifuku Maru, Hamburg
BEANS, COCOA—643,758 lbs, Rotterdam, Amsterdam
14,200 lbs, City of Batavia, Auckland
10,464 lbs, City of Batavia, Lyttleton
15,800 lbs, Port Hunter, Auckland
22,800 lbs, Port Hunter, New Plymouth
BLACK, BONE—2,945 lbs, Elzasier, Antwerp
BLUE, LAUNDRY—1,822 lbs, Redbird, Nuevitas
BRISTLES—728 lbs, Minnewaska, London
CADMIUM SULPHIDE—1,908 lbs, Kasenga, Bombay
CALCIUM ARSENATE—47,500 lbs, Brazil, Hamburg
1,100 lbs, Astrea, Cape Haitien
CARBIDE—7,988 lbs, Carrillo, Tela
44,264 lbs, Redbird, Nuevitas
38,110 lbs, Lara, Puerto Cabello
10,600 lbs, Venezuela, La Union
26,050 lbs, City of Eastbourne, Colombo
2,175 lbs, Venezuela, Corinto
6,250 lbs, August Leonhardt, Buenaventura
5,011 lbs, Santa Elisa, Cruz Grande
33,612 lbs, Santa Elisa, San Antonio
92,840 lbs, Miraflores, Manzanillo
CALCIUM CARBIDE—84,400 lbs, Miraflores, Santiago
83,456 lbs, M C Holm, Cardenas
12,500 lbs, Amazone, La Guaira
25,600 lbs, Amazone, Maracaibo
CHLORIDE—2,472 lbs, Sixaola, Cristobal
CARBON TETRACHLORIDE—2,254 lbs, Santa Elisa, Iquique
CASEIN—32,460 lbs, Stockholm, Harnosand
4,124 lbs, Toledo, Manila
CINNAMON—26,018 lbs, Panuco, Tampico
59,642 lbs, Havana, Vera Cruz
CORNFLOUR—2,602 lbs, Redbird, Nuevitas
14,275 lbs, Sixaola, Puerto Colombia
1,425 lbs, August Leonhardt, Buenaventura
9,958 lbs, Pinar Rio, Caibarien
1,920 lbs, Port Hunter, Dunedin
1,412 lbs, Gustavsholm, Stockholm
14,036 lbs, M C Holm, Cardenas
101,520 lbs, Toledo, Manila
56,400 lbs, Toledo, Shanghai
1,218 lbs, Toledo, Chefoo
1,132 lbs, Ulua, Havana
DEXTRIN, CORN—7,050 lbs, Kasenga, Calcutta
20,040 lbs, Toloa, Shanghai
4,512 lbs, Mexico, Vera Cruz
DIBUTYL PHTHALATE—4,875 lbs, London Corporation, London
DYES—63,405 lbs, Kasenga, Bombay
9,175 lbs, Kasenga, Calcutta
8,477 lbs, Brazil, Guben
392,011 lbs, President Van Buren, Shanghai
43,221 lbs, President Van Buren, Kobe
1,590 lbs, Amazone, La Guaira
EPSOM SALT—2,928 lbs, Astrea, Cape Haitien
ERGOT—5,389 lbs, Chifuku, Hamburg
EXTRACT, LOGWOOD—8,294 lbs, Caledonia, Glasgow
QUEBRACHO—84,040 lbs, Panuco, Tampico
TANNING—26,818 lbs, London Corpn, London
1,226 lbs, Mexico, Vera Cruz
WITCH HAZEL—1,484 lbs, Idaho, Hull
FLOWERS, CHAMOMILE—3,307 lbs, Chifuku, Hamburg
FORMALDEHYDE—2,388 lbs, Santa Eliza, Talcahuano
39,430 lbs, Knight Companion, Belawan
1,247 lbs, Havana, Vera Cruz
GASOLINE—10,000 gls, Lara, La Guaira
19,340 gls, Pt Hunter, Dunedin
500 gls, Astrea, Jacmel
GLUCOSE, SOLID—8,164 lbs, Kasenga, Calcutta
4,051 lbs, Kasenga, Madras
1,272 lbs, Pt Hunter, New Plymouth
GLUE—2,964 lbs, Mexico, Havana
14,518 lbs, M C Holm, Havana
DRY—1,480 lbs, Nordsterjernen, Cienfuegos
GRAPHITE—2,950 lbs, Idaho, Hull
GREASE, ANIMAL—247,924 lbs, Rotterdam, Rotterdam
177,640 lbs, M C Holm, Havana
AXLE—7,802 lbs, Santa Eliza, Talcahuano
1,400 lbs, Ulua, Puntarenas
LUBRICATENG—17,452 lbs, Caledonia, Glasgow
1,925 lbs, Sixaola, Kingston
4,860 lbs, Venezuela, Corinto
8,974 lbs, Kasenga, Calcutta
17,215 lbs, Kasenga, Bombay
21,078 lbs, Kasenga, Madras
4,521 lbs, Ulua, Havana
7,254 lbs, City of Batavia, Auckland
8,491 lbs, City of Batavia, Wellington
10,265 lbs, City of Batavia, Invercargill
4,678 lbs, Hjelmaren, Helsingfors
7,216 lbs, Venezuela, Acajutla
2,220 lbs, Astrea, Port Prince
5,943 lbs, West Carnifax, Piraeus
30,075 lbs, West Carnifax, Constantinople

Current Prices are now printed in connection with the Market Reports. See index, page 2.

GREASE, LUBRICATING—1,042 lbs, M C Holm, Havana
10,975 lbs, Sandown Castle, Lourenco Marques
32,162 lbs, Sandown Castle, Mombasa
3,784 lbs, Sandown Castle, Mozambique
11,642 lbs, City of Eastbourne, Canton
13,451 lbs, City of Eastbourne, Manila
140,017 lbs, City of Eastbourne, Hongkong
9,274 lbs, City of Eastbourne, Saigon
2,096 lbs, City of Eastbourne, Bangkok
1,475 lbs, City of Eastbourne, Colombo
6,114 lbs, City of Eastbourne, Pt Swettinham
14,841 lbs, City of Eastbourne, Singapore
16,825 lbs, Minnewaska, London
120,431 lbs, Chifuku, Hamburg
9,274 lbs, Port Hunter, Auckland
1,508 lbs, Port Hunter, Dunedin
4,262 lbs, Port Hunter, Timaru
56,025 lbs, Panuco, Tampico
62,957 lbs, Brazil, Hamburg
4,418 lbs, Gustavsholm, Stockholm
10,813 lbs, Gustavsholm, Helsingfors
7,250 lbs, Santa Eliza, Callao
1,872 lbs, Santa Eliza, Arequipa
7,924 lbs, Santa Eliza, Valparaiso
1,034 lbs, Santa Eliza, Talcahuano
9,585 lbs, Redbird, Nuevitas
13,787 lbs, London Corpn, London
2,441 lbs, Idaho, Aberdeen
88,014 lbs, Toledo, Manila
405,248 lbs, Toledo, Shanghai
44,363 lbs, Knight Companion, Soerabaya
7,514 lbs, Knight Companion, Semerang
1,308 lbs, Knight Companion, Sigli
41,375 lbs, Knight Companion, Batavia
4,364 lbs, Tagliamento, Genoa
SOAP—66,769 lbs, Pinar Rio, Havana
GUM, ALOE, RESIDUE—34,875 lbs, Chifuku, Hamburg
ARABIC—1,020 lbs, Panuco, Tampico
1,271 lbs, Mexico, Mexico City
CAMPHOR—814 lbs, Mexico, Vera Cruz
KAURI—3,058 lbs, Minnewaska, London
OLIBANUM—1,239 lbs, Venezuela, Panama
HAIR, HOG—25,936 lbs, Samaria, Liverpool
31,326 lbs, Caledonia, Glasgow
60,776 lbs, Chifuku, Hamburg
23,009 lbs, Brazil, Hamburg
HYDROGEN PEROXIDE—21,561 lbs, Havana, Mexico City
INK, PRINTING—1,285 lbs, Mauretania, Southampton
2,826 lbs, Santa Elisa, Valparaiso
17,210 lbs, Mexico, Vera Cruz
77,991 lbs, President Van Buren, Shanghai
3,112 lbs, Sandown Castle, Port Natal
4,084 lbs, Havana, Vera Cruz
WRITING—2,445 lbs, President Van Buren, Tientsin
1,721 lbs, President Van Buren, Dairen
KEROSENE—2,100 gls, Nerissa, St John's
5,440 gls, Port Hunter, Dunedin
LACQUER—1,864 lbs, City of Batavia, Wellington
4,506 lbs, City of Batavia, Auckland
7,884 lbs, Sinsinawa, Genoa
29,308 lbs, Sinsinawa, Turin
4,512 lbs, Port Hunter, Wellington
6,380 lbs, Brazil, Berlin
1,038 lbs, Cedarbank, Hongkong
4,196 lbs, Stuttgart, Berlin
CLEAR—4,268 lbs, Sinsinawa, Turin
COLOR—2,709 lbs, Dresden, Berlin
1,681 lbs, Sandown Castle, Port Natal
PYROXYLIN—4,266 lbs, Kasenga, Bombay
THINNER—3,520 gls, Sinsinawa, Fiat
1,100 gls, Brazil, Berlin
LARD—25,350 lbs, Sixaola, Cartagena
77,120 lbs, Sixaola, Puerto Colombia
65,150 lbs, Sixaola, Santa Marta
8,510 lbs, Caledonia, Glasgow
13,368 lbs, Pinar del Rio, Caibarien
22,664 lbs, Pinar del Rio, Havana
520,000 lbs, Dresden, Neufahrwassar
330,500 lbs, Dresden, Bremen
10,170 lbs, Redbird, Caibarien
23,266 lbs, Dorothy, Santo Domingo
32,563 lbs, Sinsinawa, Marseilles
20,000 lbs, Lara, Maracaibo
9,450 lbs, Hjelmaren, Stockholm
11,227 lbs, Hjelmaren, Helsingfors
389,525 lbs, Rotterdam, Rotterdam
51,424 lbs, Rotterdam, Amsterdam
11,025 lbs, Rotterdam, Frankfurt
31,500 lbs, Rotterdam, Coblenz
254,705 lbs, Seydlitz, Bremen
69,300 lbs, Gustavsholm, Stockholm
3,100 lbs, Gustavsholm, Oskarshamm
3,150 lbs, Gustavsholm, Stugsund
14,395 lbs, Krosfond, Antilla
37,930 lbs, Krosfond, Tanamo
26,147 lbs, Santa Elisa, Talara
20,876 lbs, M C Holm, Havana
22,746 lbs, M C Holm, Matanzas
5,390 lbs, Astrea, Miragoane
12,475 lbs, Astrea, Jeremie
6,500 lbs, Bridgetown, Medellin
13,000 lbs, Berlin, Bremen
19,800 lbs, Berlin, Helsingfors
6,500 lbs, Berlin, Abo
13,000 lbs, Berlin, Wiborg
6,600 lbs, Berlin, Mantyluoto
6,250 lbs, George Washington, Wiborg
216,900 lbs, London Corporation, London
17,550 lbs, Idaho, Aberdeen
467,025 lbs, Idaho, Hull
LEAD, ARSENATE—3,120 lbs, City of Batavia, Napier
WHITE—13,175 lbs, Minnewaska, London
4,918 lbs, President Van Buren, Shanghai
LEAVES, SENNA—826 lbs, Venezuela, Panama
MAGNESIA, CARBONATE—1,784 lbs, Havana, Vera Cruz
MILK—28,950 lbs, M C Holm, Havana
MILK, POWD—4,816 lbs, Mexico, Mexico City
5,687 lbs, M C Holm, Havana
1,250 lbs, President Van Buren, Singapore
4,481 lbs, President Van Buren, Shanghai
6,810 lbs, President Van Buren, Kobe
NAPHTHA—148,092 lbs, Vacoil, Lisbon
240 gls, Port Hunter, Auckland
400 gls, Port Hunter, Dunedin
42,500 gls, Sandown Castle, Mozambique
70,000 gls, Sandown Castle, Capetown
70,000 gls, Sandown Castle, Lourenco Marques
234,690 gls, Sandown Castle, Mombasa
7,500 gls, Sandown Castle, Tanga
14,700 gls, Sandown Castle, Dares Salaam
OIL, BURNING—275 gls, City of Eastbourne, Canton
CASTOR—3,112 lbs, City of Eastbourne, Manila
1,160 lbs, Astrea, Cape Haitien
CORDAGE—183,999 lbs, Pinar Rio, Matanzas
COTTONSEED—3,450 lbs, Port Hunter, Lyttleton
CREOSOTE—8,110 lbs, Mexico, Beristain
EDIBLE—13,150 lbs, August Leonhardt, Puerto Colombia
2,220 lbs, Redbird, Nuevitas
2,418 lbs, Kasenga, Bombay
8,766 lbs, Pinar Rio, Matanzas
6,244 lbs, Port Hunter, Lyttleton
3,108 lbs, Port Hunter, Dunedin
8,750 lbs, Miraflores, Santiago
2,714 lbs, Sandown Castle, East London
3,076 lbs, Sandown Castle, Lourenco Marques
ENGINE—1,722 lbs, Rotterdam, Rotterdam
1,100 lbs, Santa Eliza, Cruz Grande
FUEL—2,750 gls, Port Hunter, Auckland
630 gls, Bermuda, Hamilton
ILLUMINATING—127,204 gls, Lackawanna, Manchester
LINSEED—6,760 lbs, Miraflores, Santiago
3,278 lbs, Havana, Havana
6,884 lbs, Mexico, Tampico
1,022 lbs, Mexico, Vera Cruz
7,476 lbs, M C Holm, Havana

OIL, LUBRICATING—3,850 gls, Lara, Maracaibo
1,375 gls, Redbird, Nuevitas
8,400 gls, Dresden, Bremen
840 gls, Samaria, Liverpool
33,198 gls, Rotterdam, Rotterdam
3,780 gls, Rotterdam, Cologne
3,970 gls, Rotterdam, Amsterdam
7,560 gls, Colombo, Genoa
24,738 gls, Colombo, Naples
770 gls, Colombo, Puerto Castillo
3,853 gls, Hjelmaren, Stockholm
2,100 gls, Hjelmaren, Helsingfors
14,745 gls, City of Eastbourne, Colombo
34,860 gls, City of Eastbourne, Singapore
12,240 gls, City of Eastbourne, Bangkok
83,000 gls, City of Eastbourne, Hongkong
28,370 gls, City of Eastbourne, Saigon
16,615 gls, City of Eastbourne, Canton
3,350 gls, City of Eastbourne, Haiphong
1,150 gls, City of Eastbourne, Port Swettingham
8,460 gls, City of Eastbourne, Port Said
30,370 gls, City of Eastbourne, Manila
1,685 gls, City of Batavia, Dunedin
26,475 gls, City of Batavia, Invercargill
19,835 gls, City of Batavia, Wellington
54,765 gls, City of Batavia, Wanganui
61,702 gls, City of Batavia, Auckland
27,530 gls, City of Batavia, Lyttleton
2,200 gls, City of Batavia, New Plymouth
4,235 gls, City of Batavia, Timaru
4,400 gls, City of Batavia, Napier
2,755 gls, Ulua, Havana
275 gls, Ulua, Panama
620 gls, Venezuela, Corinto
2,175 gls, Venezuela, La Union
510 gls, Venezuela, Acajutla
24,160 gls, Kasenga, Karachi
59,665 gls, Kasenga, Madras
72,460 gls, Kasenga, Bombay
57,390 gls, Kasenga, Calcutta
660 gls, Sixaola, Cartagena
1,650 gls, Sixaola, Puerto Colombia
6,804 gls, Caledonia, Glasgow
22,509 gls, Minnewaska, London
23,350 gls, Chifuku Maru, Hamburg
4,200 gls, Seydlitz, Hamburg
5,540 gls, Port Hunter, Auckland
8,250 gls, Port Hunter, Lyttleton
13,850 gls, Port Hunter, Dunedin
1,100 gls, Port Hunter, Invercargill
300 gls, Port Hunter, Bluff
210 gls, Port Hunter, Timaru
6,215 gls, Port Hunter, Wellington
4,450 gls, Panuco, Tampico
14,700 gls, Brazil, Hamburg
9,992 gls, Gustavsholm, Stockholm
16,138 gls, Gustavsholm, Helsingfors
378 gls, Gustavsholm, Sundsvall
2,025 gls, Santa Eliza, Salaverry
7,895 gls, Santa Eliza, Callao
865 gls, Santa Eliza, Pisco
2,204 gls, Santa Eliza, Arequipa
7,895 gls, Santa Eliza, Callao
865 gls, Santa Eliza, Pisco
2,268 gls, Santa Eliza, Iquique
1,100 gls, Santa Eliza, Antofogasta
6,105 gls, Santa Eliza, Intermaco
1,100 gls, Santa Eliza, Uyuni
725 gls, Santa Eliza, Oruro
450 gls, Santa Eliza, Coquimbo
5,570 gls, Santa Eliza, Valparaiso
4,675 gls, Santa Eliza, San Atnonio
1,540 gls, Santa Eliza, Talcahuano
1,050 gls, Santa Eliza, Corral
1,100 gls, Santa Eliza, Puerto Montt
10,500 gls, Sandown Castle, Mozambique
825 gls, Sandown Castle, Algoa Bay
25,704 gls, Tagliamento, Genoa
1,260 gls, Tagliamento, Leghorn
550 gls, Tagliamento, Catania
1,260 gls, Tagliamento, Naples
3,645 gls, Havana, Vera Cruz
2,940 gls, Maravi, Port of Spain
7,040 gls, Nordstjernen, Niquero
1,162,767 gls, Lackawanna, Manchester
9,156 gls, London Corporation, London
2,436 gls, Idaho, Aberdeen
7,707 gls, Idaho, Hull
330,375 gls, Toledo, Shanghai
32,760 gls, Knight Companion, Balik Papan
15,760 gls, Knight Companion, Surabaya
18,185 gls, Knight Companion, Semerang
440 gls, Knight Companion, Sigli
2,640 gls, Knight Companion, Belawan
510 gls, Knight Companion, Menado
30,250 gls, Knight Companion, Batavia
1,750 gls, Mexico, Mexico City
440 gls, Paul H Harwood, San Nicholas
2,425 gls, M C Holm, Havana
660 gls, Astrea, Cape Haitien
275 gls, Astrea, Port Prince
336 gls, Bermuda, Hamilton
260 gls, Bridgetown, Cartagena
550 gls, Bridgetown, Bogota
22,650 gls, Bridgetown, Puerto Colombia
2,090 gls, President Van Buren, Shanghai
3,150 gls, West Carnifax, Piraeus
3,300 gls, West Carnifax, Salonica
500 gls, Sandown Castle, Port Natal
8,475 gls, Sandown Castle, Lourenco Marques
157,645 gls, Sandown Castle, Mombasa
3,265 gls, Sandown Castle, Tanga
MUTTON—11,268 lbs, West Carnifax, Piraeus
OLEO—868,166 lbs, Rotterdam, Rotterdam
35,695 lbs, Caledonia, Glasgow
44,341 lbs, Minnewaska, London
12,850 lbs, Brazil, Hamburg
4,591 lbs, George Washington, Bremen
RED—32,200 lbs, Brazil, Hamburg
4,018 lbs, Mexico, Vera Cruz
SOYA BEAN—26,281 lbs, Havana, Havana
TAR—1,380 lbs, City of Eastbourne, Manila
TRANSFORMER—550 gls, City of Batavia, Auckland
300 gls, City of Eastbourne, Haiphong
1,375 gls, Port Hunter, Wellington
385 gls, Port Hunter, New Plymouth
825 gls, Santa Eliza, Arequipa
3,200 gls, Toledo, Shanghai
1,100 gls, Knight Companion, Surabaya
550 gls, Knight Companion, Semerang
8,250 gls, London Corporation, London
VALVE—5,000 lbs, Havana, Vera Cruz
OILCAKE, COPRA—112,000 lbs, Elzasier, Antwerp
LINSEED—339,258 lbs, Rotterdam, Rotterdam
2,734,184 lbs, Elzasier, Antwerp
3,731,232 lbs, Suevier, Antwerp
72,450 lbs, Minnewaska, London
OILMEAL, LINSEED—18,750 lbs, Maraval, San Fernando
143,750 lbs, Maraval, Port of Spain
OXYGEN—1,775 lbs, Maraval, Bolivar
2,800 lbs, Maraval, San Fernando
PAINT—5,524 lbs, Santa Eliza, Callao
23,564 lbs, Santa Eliza, Valparaiso
2,348 lbs, Port Hunter, Wellington
2,341 lbs, Redbird, Cardenas
4,136 lbs, Pinar Rio, Havana
2,128 lbs, City of Batavia, Wellington
1,367 lbs, Ulua, Havana
8,146 lbs, Sixaola, Bocas Toro
7,442 lbs, Toledo, Manila
18,347 lbs, Havana, Havana
9,074 lbs, Nordsteyernen, Cienfuegos
3,112 lbs, Nordsteyernen, Niquero
2,131 lbs, Knight Companion, Semerang
ALUMINUM—1,920 lbs, Knight Companion, Belawan
ASPHALT—4,162 lbs, Santa Eliza, Salaverry
DRY—6,085 lbs, City of Eastbourne Singapore
1,843 lbs, Port Hunter, Wellington
LIQUID—132 gls, Dresden, Berlin
918 gls, Hjelmaren, Stockholm
384 gls, Gustavsholm, Stockholm
120 gls, Havana, Mexico City

PAINT, OIL—3,108 lbs, Port Hunter, Auckland
PASTE—10,446 lbs, Hjelmaren, Stockholm
1,530 lbs, Stuttgart, Berlin
2,824 lbs, London Corp, London
PREPARED—3,842 lbs, Carrillo, Porto Castilla
1,420 lbs, Carrillo, Tela
15,606 lbs, Santa Eliza, San Antonio
6,784 lbs, Santa Eliza, Callao
PETROLATUM—5,261 lbs, Kasenga, Port Said
PETROLEUM, REFD—3,000 gls, Lara, Caracas
250 gls, Lara, La Guaira
100,150 gls, Kasenga, Bombay
50,000 gls, Port Hunter, Wellington
75,000 gls, Port Hunter, Auckland
76,524 gls, Vacoil, Lisbon
25,000 gls, Sandown Castle, Dares Salaam
60,000 gls, Sandown Castle, Mozambique
PIMENTO—20,160 lbs, Minnewaska, London
PITCH—85,550 lbs, Chifuku, Hamburg
BREWERS—11,517 lbs, London Corp, London
POTASH CHLORATE—2,680 lbs, Maraval, Port of Spain
XANTHATE—4,840 lbs, Sinsinawa, Marseilles
ROOT, BELLADONNA—2,033 lbs, Chifuku, Hamburg
SENEGA—1,203 lbs, Tagliamento, Genoa
ROSIN—19,862 lbs, City of Batavia, Dunedin
15,250 lbs, City of Batavia, Lyttleton
9,875 lbs, Sandown Castle, Durban
SEED, CUMIN—10,150 lbs, Panuco, Tampico
SHELLAC, BLEACHED—3,350 lbs, President Van Buren, Osaka
SILICA—13,050 lbs, Pinar Rio, Havana
102,050 lbs, City of Eastbourne, Manila
SOAP—1,792 lbs, Sixaola, Panama
1,590 lbs, Santa Eliza, Lima
1,584 lbs, Santa Eliza, Pisco
2,400 lbs, Santa Eliza, Talcahuano
22,960 lbs, Miraflores, Santiago
2,640 lbs, Santa Eliza, Callao
30,600 lbs, Astrea, Jacmel
30,000 lbs, Astrea, Aux Cayes
11,500 lbs, George Washington, Gothenburg
4,501 lbs, Bermuda, Hamilton
2,565 lbs, Bridgetown, Miragoane
LAUNDRY—7,275 lbs, Carrillo, Tela
23,200 lbs, Dorothy, Santo Domingo
4,500 lbs, Dorothy, Sanchez
13,250 lbs, Dorothy, Porto Plata
3,638 lbs, Sixaola, Santa Marta
25,000 lbs, Astrea, Aux Cayes
10,000 lbs, Astrea, Port Palx
20,500 lbs, Astrea, Cape Haitien
10,250 lbs, Astrea, Gonaives
20,500 lbs, Astrea, St Marc
8,800 lbs, President Van Buren, Shanghai
11,400 lbs, Maraval, Port Spain
610,500 lbs, Toledo, Manila
POWDER—25,036 lbs, Santa Eli a, Supe
SODA, ASH—48,900 lbs, Ulua, Havana
3,386 lbs, Kasenga, Bombay
2,105 lbs, Kasenga, Calcutta
166,775 lbs, Pinar Rio, Havana
65,575 lbs, Rotterdam, Rotterdam
12,260 lbs, Santa Eliza, Supe
16,725 lbs, Panuco, Tampico
54,442 lbs, Santa Eliza, Callao
BICARBONATE—5,664 lbs, Lara, Maracaibo
2,470 lbs, Venezuela, Acajutla
41,210 lbs, Kasenga, Madras
45,950 lbs, Brazil, Hamburg
41,250 lbs, Kasenga, Bombay
32,785 lbs, Kasenga, Calcutta
6,022 lbs, Bridgetown, Bogota
12,160 lbs, M C Holm, Havana
31,275 lbs, Toledo, Manila
30,750 lbs, President Van Buren, Hongkong
CAUSTIC—28,880 lbs, Ulua, Puntarenas
108,300 lbs, Ulua, Havana
5,768 lbs, Ulua, Pt Limon
131,500 lbs, Pinar Rio, Havana
5,010 lbs, Port Hunter, Dunedin
120,854 lbs, Panuco, Tampico
79,261 lbs, Panuco, Mexico City
311,256 lbs, Cedarbank, Shanghai
24,480 lbs, Santa Eliza, Supe
138,363 lbs, M C Holm, Havana
41,280 lbs, Havana, Vera Cruz
10,100 lbs, Havana, Mexico City
14,410 lbs, Knight Companion, Oosthaven
144,100 lbs, Knight Companion, Batavia
STARCH, CORN—14,100 lbs, Kasenga, Port Said
2,610 lbs, Ulua, Pt Limon
14,104 lbs, Kasenga, Madras
60,912 lbs, Kasenga, Jammagar
3,018 lbs, Port Hunter, Wellington
1,540 lbs, Miraflores, Guantanamo
10,760 lbs, Idaho, Aberdeen
3,085 lbs, Toledo, Manila
4,510 lbs, Toledo, Hongkong
9,250 lbs, Knight Companion, Semerang
3,165 lbs, Knight Companion, Cheribon
1,925 lbs, Knight Companion, Pontianak
2,050 lbs, Knight Companion, Oleh Leh
1,590 lbs, Knight Companion, Batoedesa
1,325 lbs, Knight Companion, Tandjong Balei
CYANIDE—18,175 lbs, Panuco, Tampico
43,800 lbs, Cedarbank, Manila
PEROXIDE—6,441 lbs, Cedarbank, Manila
PRUSSIATE—1,068 lbs, M C Holm, Havana
SULPHITE—2,328 lbs, President Van Buren, Manila
SPONGES—2,897 lbs, Stuttgart, Bremen
1,325 lbs, Knight Companion, Labocan Bilik
11,816 lbs, Mexico, Vera Cruz
7,018 lbs, Mexico, Cardenas
13,050 lbs, President Van Buren, Manila
1,560 lbs, President Van Buren, Shanghai
2,855 lbs, Sandown Castle, Pt Natal
5,182 lbs, Sandown Castle, Durban
3,458 lbs, Sandown Castle, Lourenco Marques
3,150 lbs, Pt Hunter, Dunedin
SYRUP, CORN—14,600 lbs, City of Batavia, Wellington
3,081 lbs, Kasenga, Madras
1,513 lbs, Sixaola, Cartegena
91,445 lbs, Caledonia, Glasgow
1,530 lbs, Panuco, Tampico
3,789 lbs, President Van Buren, Singapore
3,742 lbs, President Van Buren, Hongkong
10,040 lbs, President Van Buren, Shaghai
36,550 lbs, Sandown Castle, Durban
19,814 lbs, Idaho, Aberdeen
TALC—8,120 lbs, Sixaola, Cartegena
9,931 lbs, President Van Buren, Manila
5,108 lbs, Toledo, Manila
TALLOW—4,521 lbs, Sixaola, Cartegena
TOILET PREPS—42,770 lbs, London Corp, London
2,055 lbs, President Van Buren, Honolulu
TURPENTINE—450 gls, City of Batavia, Dunedin
700 gls, City of Batavia, Wellington
750 gls, City of Batavia, Auckland
750 gls, Ulua, Havana
1,100 gls, Sixaola, Cartagena
275 gls, Nerissa, St Johns
1,300 gls, Port Hunter, Auckland
900 gls, Port Hunter, Lyttleton
700 gls, Port Hunter, Dunedin
1,000 gls, Port Hunter, Wellington
250 gls, Santa Eliza, Arequipa
200 gls, Mexico, La Compana
VARNISH—2,706 lbs, Gustavsholm, Stockholm
5,261 lbs, Gustavsholm, Helsingfors
WAX, BEES—11,483 lbs, Elzasier, Antwerp
735 lbs, Mexico, La Campana

WAX, PARAFFIN—870,162 lbs, Colombo, Genoa
8,184 lbs, Rotterdam, Rotterdam
22,300 lbs, Rotterdam, Amsterdam
97,008 lbs, Sinsinawa, Naples
57,982 lbs, Sinsinawa, Leghorn
53,750 lbs, Hjelmaren, Wiborg
44,599 lbs, Hjelmaren, Helsingfors
22,046 lbs, Sixaola, Puerto Colombia
36,787 lbs, Chifuku, Hamburg
39,641 lbs, Port Hunter, Wellington
21,030 lbs, Port Hunter, Auckland
6,691 lbs, Gustavsholm, Helsingfors
44,599 lbs, Stockholm, Stockholm
110,000 lbs, Santa Elisa, Talcahuano
30,834 lbs, President Van Buren, Hongkong
103,026 lbs, Tagliamento, Genoa
100,440 lbs, Tagliamento, Naples
44,599 lbs, Tagliamento, Palermo
10,575 lbs, Havana, Vera Cruz
56,863 lbs, London Corporation, London
49,280 lbs, Idaho, Hull
PARAFFIN, SCALE—21,065 lbs, Colombo, Genoa
84,110 lbs, Sandown Castle, Lourenco Marques
ZINC, DROSS—53,889 lbs, Suevier, Antwerp
OXIDE—20,170 lbs, City of Eastbourne, Singapore
49,450 lbs, Rotterdam, Amsterdam
48,800 lbs, Sinsinawa, Genoa
15,525 lbs, Knight Companion, Semerang
STEARATE—1,282 lbs, Mexico, La Campana
SULPHATE—21,050 lbs, Panuco, Tampico

Clearance Dates

Amazone, August 17
Aquitania, August 22
Astrea, August 17
Atlantida, August 28
Berlin, August 24
Bermuda, August 24
Brazil, July 13
Bridgetown, August 1
Carrillo, August 17
Castilla, August 24
Cedarbank, August 22
Chifuku, July 27
City of Batavia, July 31
Colombo, August 14
Dorothy, August 18
Dresden, August 1
Elzasier, August 8
Etna, August 31
Evangeline, August 31
Evangeline, September 3
Fort Victoria, July 20
George Washington, August 21
Gustavsholm, August 24
Hjelmaren, August 10
Idaho, August 24
Kasenga, August 10
Knight Companion, August 24
Krosfond, August 17
Lackawanna, September 1
Lara, August 1
London Corporation, August 10
Maraval, July 31
Margaret, August 24
Mauretania, August 16
M C Holm, August 8
Mexico, August 15
Minnewaska, August 10
Miraflores, August 24
Nerissa, August 16
Nordsterjernen, August 15
Panuco, August 16
Paul H Harwood, August 31
Pinar del R'o, July 25
Port Hunter, August 21
President Van Buren, August 21
Redbird, August 17
Rotterdam, August 3
Samaria, August 10
Sandown Castle, August 15
Santa Elisa, August 15
Seydlitz, August 20
Sinsinawa, August 14
Sixaola, August 14
Stockholm, August 22
Stuttgart, August 22
Suevier, August 15
Tagliamento, August 22
Toledo, July 26
Ulua, August 17
Vacoil, August 29
Venezuela August 18
West Carnifax, ——

Exports from Baltimore

AMMONIA SULPHATE—26,000 bgs, 2,240 tons, Santa Isabel, Honolulu
430 bgs, 86,000 lbs, Santa Isabel, Honolulu
ASPHALT, PETROLEUM—1,094 dms, 546,673 lbs, Hannover, Hamburg
CLEANING POWDER—550 cs, 26,802 lbs, Artigas, Manchester
EXTRACT, DYEWOOD—2 bxs, 110 lbs, Hannover, Hamburg
LOGWOOD—50 cks, 5,500 lbs, Glasgow, Kobe
15 bbls, 7,753 lbs, Manchester Shipper, Liverpool
HEMATITE CRYSTAL—5 bbls, 1,424 lbs, Manchester Shipper, Liverpool
MEDICINAL PREPS—540 cs, 282,772 lbs, Missouri, London
OIL, LUBRICATNG—35 dms, 46 bbls, Malakand, London
95 bbls, Malakand, London
30 dms, 39 bbls, Manchester Shipper, Liverpool
ENGINE, RED—220 bbls, 11,000 gls, Malakand, London
375 bbls, 13,500 gls, Manchester Shipper, Liverpool
SOAP POWDER—10 kegs, 2,000 lbs, Missouri, London
STARCH—432 bgs, 60,480 lbs, Malakand, London
CORN—880 bgs, 124,080 lbs, Missouri, London
2,200 bgs, 310,200 lbs, Artiges, Manchester
SUPERPHOSPHATE—1,580 tons, schooner T N Barnsdall, San Juen

Exports from Baton Rouge

NAPHTHA—81,400 bbls, Navahoe, London
17,500 bbls, Rotterdam, Rotterdam
OIL, GAS—7,300 bbls, Rotterdam, Rotterdam
PETROLEUM, REF'D—61,300 bbls, Rotterdam, Rotterdam
62,900 bbls, Iroquois, London

Clearance Dates

Iroquois, August 23
Navahoe, August 23
Rotterdam, August 25

Exports from Beaumont

BENZIN—4,197 tons, Henri Desmarais, Blaye
GASOLINE—1,680,000 gls, Arnus, Vigo
KEROSENE—3,200 tons, Henri Desmarais, Blaye
235,200 gls, Arnus, Vigo
SULPHUR—1,999 tons, Sheaf Lance, Tarragona

Clearance Dates

Arnus, August 25
Henri Desmarais, August 22
Sheaf Lance, August 22

Current Prices are now printed in connection with the Market Reports. See index, page 2.

Exports from Boston

ACID, ACETIC—25 crbys, 2,770 lbs, San Bruno, Havana
BORIC, POWD—1 bbl, 200 lbs, Prince George, Yarmouth
BLUE, LAUNDRY—2 cs, 200 lbs, Yarmouth, Yarmouth
CEMENT, CAN—12 dms, 5,270 lbs, Manaar, London
CHINA—5 cs, 90 lbs, Manaar, London
FURNACE—12 kgs, 450 lbs, Manaar, London
RUBBER—9 bbls, 11 cs, 3,516 lbs, San Bruno, Havana
1 cs, 200 lbs, Brazilian Prince, Montevideo
10 bbls, 3,000 lbs, Steel Navigator, Manila
CHALK, MARKING—1 pkg, 231 lbs, Prince George, Yarmouth
CHARCOAL, PHOTOENGRAVERS'—10 bbls, 737 lbs, Manaar, London
COLOR, MORTAR—1 bbl, 535 lbs, Yarmouth, Yarmouth
DISINFECTANT—40 cs, 10 crtns, 4,740 lbs, Manaar, London
COALTAR—30 bbls, 13,050 lbs, Steel Navigator, Java
DRESSING, SHOE—4 kgs, 8 cs, 616 lbs, San Bruno, Havana
3 cs, 250 lbs, Brazilian Prince, Montevideo
3 cans, 8 kgs, 9 cs, 1,439 lbs, Brazilian Prince, Buenos Aires
4 kgs, 205 lbs, Steel Navigator, Manila
DRUGGISTS' SUNDRIES—13 cs, 1,532 lbs, President Polk, Shanghai
RUBBER—4 cs, 364 lbs, President Polk, Shanghai
3 cs, 450 lbs, President Polk, Hongkong
1 cs, 200 lbs, President Polk, Honolulu
DYESTUFFS—3 bbls, 151 cs, 3,928 lbs, President Polk, Kobe
120 cs, 1,920 lbs, President Polk, Shanghai
FELDSPAR, GROUND—1 bg, 100 lbs, Yarmouth, Yarmouth
GLAUBER'S SALT—50 bbls, 15,000 lbs, San Bruno, Havana
GLUE, LIQUID—74 cs, 58 pkgs, 8,518 lbs, Manaar, London
2 cs, 104 lbs, Steel Navigator, Manila
PHOTOENGRAVERS'—25 cs, 1,500 lbs, Manaar, London
HAIR, HOG—33 bls, 12,000 lbs, Manaar, London
INK, PRINTING—14 dms, 3,540 lbs, Steel Navigator, Batavia
6 dms, 768 lbs, Steel Navigator, Belawan
5 bbls, 2,342 lbs, President Polk, Kobe
WRITING—6 bxs, 246 lbs, San Bruno, Havana
134 pkgs, 6,345 lbs, Steel Navigator, Honolulu
92 pkgs, 4,985 lbs, Steel Navigator, Manila
24 pkgs, 1,627 lbs, President Polk, Shanghai
14 pkgs, 761 lbs, President Polk, Honolulu
31 pkgs, 1,473 lbs, President Polk, Manila
INVALID FOOD—8 cs, 190 lbs, San Bruno, Havana
MEDICINAL PREPS—3 cs, 322 lbs, President Polk, Shanghai
MUCILAGE—2 bxs, 155 lbs, Steel Navigator, Honolulu
OIL, GEAR—1 bbl, 50 gls, Yarmouth, Yarmouth
LUBRICATING—5 cs, 345 lbs, Manaar, London
5 bbls, 260 gls, Yarmouth, Yarmouth
PAINT—1 dm, 50 lbs, Yarmouth, Yarmouth
1 bx, 1 dm, 120 lbs, Yarmouth, Yarmouth
PASTE—1 bx, 10 lbs, San Bruno, Havana
14 dms, 1,888 lbs, Manaar, London
STATIONERS'—35 pkgs, 1,954 lbs, Steel Navigator, Manila
39 pkgs, 1,911 lbs, Steel Navigator, Honolulu
7 pkgs, 446 lbs, President Polk, Honolulu
10 pkgs, 490 lbs, President Polk, Manila
4 pkgs, 187 lbs, President Polk, Honolulu
PITCH, ROSIN—20 cs, 2,000 lbs, Casper, Oslo
POLISH, SHOE—5 cs, 750 lbs, San Bruno, Havana
4 pkgs, 512 lbs, Brazilian Prince, Buenos Aires
REPAIRER, LEATHER—1 cs, 4 lbs, Brazilian Prince, Montevideo
SEED, SUNFLOWER—2 bgs, 200 lbs, Yarmouth, Yarmouth
SHELLAC—500 bgs, 82,000 lbs, Manaar, London
SOAP, FLAKES—30 cs, 942 lbs, San Bruno, Havana
10 cs, 314 lbs, Steel Navigator, Manila
TAR—300 cs, 7,770 lbs, Steel Navigator, Manila
TOILET—100 cs, 3,030 lbs, Steel Navigator, Manila
SOFTENER, LEATHER—12 dms, 4,548 lbs, Brazilian Prince, Buenos Aires
SOLDERING SALTS—20 dms, 2,700 lbs, Manaar, London
SUPERPHOSPHATE—3,324,955 lbs, bulk, Daniel M Munro, Windsor
TALC, POWD—1 bg, 194 lbs, San Bruno, Havana
1 cs, 100 lbs, Yarmouth, Yarmouth
TANKAGE—3,052 bgs, 381,803 lbs, Daniel M Munro, Windsor
THINNER, CELLULOID—1 cs, 74 lbs, Steel Navigator, Manila
TURPENTINE, GUM—5 bbls, 255½ gls, Prince George, Yarmouth
WATER, SPRING—1 cs, 12 gls, Prince George, Yarmouth
1 pkg, 44 lbs, Yarmouth, Yarmouth
WAX, POLISHING—1 crt, 120 lbs, San Bruno, Havana
SEALING—1 cs, 65 lbs, Steel Navigator, Manila
SHOE—3 cs, 246 lbs, Steel Navigator, Manila
1 cs, 26 lbs, San Bruno, Havana
12 cs, 1 bbl, 400 lbs, Brazilian Prince, Buenos Aires
7 cs, 210 lbs, Brazilian Prince, Montevideo

Clearance Dates

Brazilian Prince, August 28
Casper, August 27
Manaar, August 24
Daniel M Munro, August 30
President Polk, August 24
Prince George, August 27, 29
San Bruno, August 21
Steel Navigator, August 23
Yarmouth, August 25, 28, 30

Exports from Galveston

ASPHALT—225 sx, West Harshaw, London
CONCENTRATES—625 sx, Colorado Springs, Liverpool
OIL LUBRICATING—40 tons, Eclipse, Shanghai
SULPHUR—2,500 tons, Nidareid, Quebec
20 tons, Texas, Copenhagen
600 tons, Steinstad, Tampico
200 tons, Steinstad, Puerto Mexico
3,800 tons, Kersten Miles, Hamburg
WAX, PARAFFIN—165 tons, Eclipse, Shanghai

Clearance Dates

Colorado Springs, August 29
Eclipse, August 25
Kersten Miles, August 30
Nidareid, August 27
Steinstad, August 29
Texas, August 27
West Harshaw, August 28

Exports from Gulfport

ROSIN—80 bbls, West Hika, Antwerp

Clearance Date

West Hika, August 25

Exports from Houston

GASOLINE—67,000 bbls, W H Tilford, Havana
1,485,183 gls, E W Sinclair, Havana
665,652 gls, E W Sinclair, Cienfuegos
52,000 bbls, Vilja, Avonmouth
GREASE—10 cs, Lake Capens, San Juan
KEROSENE—20,000 bbls, Vilja, Avonmouth
OIL, GAS—53,000 bbls, Housatonic, United Kingdom
34,000 bbls, Narragansett, United Kingdom
FUEL—144,000 bbls, George G Henry, Rio de Janeiro
1,286,938 gls, W L Connelly, Puerto Tarafa
38,000 bbls, Nelson, Havana
LUBRICATING—32,000 bbls, Narragansett, United Kingdom
75 bbls, E W Sinclair, Havana
10 dms, Lake Capens, Ponce
45 dms, Lake Capens, San Juan
OILMEAL, COTTONSEED—50 tons, West Camak, Havre
CAKE—1,000 tons, Rio Bravo, Hamburg
PETROLEUM, CRUDE—82,000 bbls, Frontenac, Montreal
SULPHUR—635 bgs, West Harshaw, London
437 bgs, Maryland, Havre
5 tons, Rio Bravo, Bremen
124 tons, Rio Bravo, Hamburg

Clearance Dates

W L Connelly, August 25
Frontenac, August 24
George G Henry, August 28
Housatonic, August 26
Lake Capens, August 27
Genevieve Lykes, August 27
Maryland, August 29
Narragansett, August 24
Nelson, August 25
Rio Bravo, August 30
E W Sinclair, August 24
W H Tilford, August 29
Vilja, August 29
West Camak, August 29
West Harshaw, August 25

Exports from Los Angeles

BORAX—110 sx, 112,000 lbs, Pacific Trader, Glasgow
2,000 sx, 226,000 lbs, Pacific Trader, London
5,086 sx, 603,000 lbs, Seattle, Hamburg
100 sx, 112,000 lbs, President Van Buren, Shanghai
3,554 bgs, 40,160 lbs, Modavia, London
200 bgs, 44,600 lbs, Siberia, Kobe
EARTH, INFUSORIAL—606 bgs, 52,732 lbs, Pacific Trader, Glasgow
557 bgs, 50,619 lbs, Pacific Trader, Manchester
GASOLINE—65,000 bbls, San Tiburcio, Lizards
65,000 bbls, Scalaria, Wellington
LEAD ARSENATE—40 dms, 4,000 lbs, Washington, La Cruz
OIL, BATCHING—8,186 bbls, Silverelm, Calcutta
DIESEL—4,621 bbls, Hoyeisan, Osaka
13,795 bbls, Altair, Shanghai
17,883 bbls, Montebello, Vancouver
30,435 bbls, Cathwood, Balboa
3,460 bbls, Akagisan, Osaka
FUEL—35,674 bbls, J A Moffett, San Jose
25,893 bbls, J A Moffett, La Union
52,761 bbls, Altair, Shanghai
43,016 bbls, Chilsco, Antofagasta
73,023 bbls, La Placentia, Antofagasta
10,311 bbls, Montebello, Vancouver
54,170 bbls, Cuyama, Pearl Harbor
43,176 bbls, Cathwood, Balboa
LEMON—15 dms, 5,700 lbs, Pacific Trader, London
PETROLEUM, CRUDE—29,061 bbls, Oleander, Yabisu
34,053 bbls, Oleander, Tauchikaki
3,373 bbls, Canadian Farmer, Vancouver
3,547 bbls, Canadian Observer, Vancouver
48,094 bbls, Montebello, Vancouver
44,392 bbls, Cedarhurst, Yokohama
SODA ASH—4,500 bgs, 909,000 lbs, Siberia, Yokohama

Clearance Dates

Altair, August 21
Akagisan, August 25
Canadian Farmer, August 22
Canadian Observer, August 22
Cathwood, August 24
Cedarhurst, August 24
Chilsco, August 22
Cuyama, August 24
Hoyeisan, August 15
La Placentia, August 23
J A Moffett, August 19
Montebello, August 24
Oleander, August 19
San Tiburco, August 25
Scalaria, August 21
Silverelm, August 18

Exports from New Orleans

AMMONIA SULPHATE—6,508 sx, Montoso, San Juan
ASPHALT—261 bgs, Michigan, Havre
BENZIN—17,181 bbls, Norne, Hamburg
BLACK, CARBON—50 cs, Michigan, Bordeaux
175 cs, Santos, Kobe
197 cs, Mount Evans, Liverpool
EXTRACT, TANNING—50 bgs, Abangorez, Puerto Barriva
800 cs, Mount Evans, Manchester
GASOLINE—1,258,000 gls, Motrex, Rouen
299,716 gls, Motrex, Bordeau
3,295,448 gls, Laristan, Bordeaux
1,000 cs, Joazeiro, Pernambuco
150 cs, 25 dms, Jose, Puerto Cabezas
2,828,139 gls, Melania, Stockholm
20 dms, Dictator, Bluefields
2,784,288 gls, Varand, London
2,211,836 gls, Sliedrecht, Rouen, Villequier
100 cs, Imperator, Bluefields
GLUCOSE—60 bbls, Mount Evans, Liverpool
60 bbls, Mount Evans, Manchester
KEROSENE—400 cs, Turrialba, Tela
348,183 gls, Norne, Lands End
562,056 gls, Motrex, La Pallice
323,908 gls, Motrex, Rouen
405,360 gls, Motrex, Bordeaux
500 cs, Joazeiro, Pernambuco
100 cs, Jose, Puerto Cabezas
LEAD, WHITE—4 bbls, Olivebank, Cape Town
LIME—500 sx, Montoso, San Juan
ACETATE—1,502 bgs, Santos, Yokohama
1,391 bgs, Santos, Kobe
MIXING COMPOUND—100 cs, Sinaloa, Tampico
OIL, COTTONSEED—25 cs, Turrialba, Tela
50 cs, Atenas, Havana
GAS—64,013 bbls, San Valerio, Lizzard
2,980,645 gls, Belbridge, Tampico
LUBRICATING—40 dms, Commercial Guide, Montevideo
986 dms, Commercial Guide, Buenos Aires
12 dms, Imperator, Bluefields
15 bbls, Gorm, Copenhagen
255 bbls, 250 dms, Santos, Yokohama
55 bbls, 118 dms, Santos, Kobe
200 bbls, Mount Evans, Manchester
REFINED—50 cs, Jose, Puerto Cabezas
17 dms, Dictator, Bluefields
135 cs, Imperator, Bluefields
PAINT—300 bbls, Mount Evans, Liverpool
PETROLEUM, REFD—29,799 bbls, Norne, Lands End
ROSIN—216 bbls, Olivebank, Cape Town
50 bbls, Olivebank, Algoa Bay
392 bbls, Olivebank, Burban
423 bbls, Olivebank, Lourenco Marques
100 bbls, Mount Evans, Liverpool
SALT—6 bbls, 12 sx, Favorita, Nicuesa
SOAP, COTTONSEED—100 bbls, Mount Evans, Liverpool
100 bbls, Mount Evans, Manchester
SODA SILICATE—335 dms, Munplace, Progreso
SULPHUR—374 bgs, Olivebank, Durban
TALLOW—30 dms, Munplace, Progreso
TRIPOLI—1,200 bgs, Mount Evans, Manchester
TURPENTINE—338 cs, Olivebank, Cape Town
280 cs, Olivebank, Algoa Bay
195 cs, Olivebank, East London
200 cs, Olivebank, Durban
110 cs, Olivebank, Lourenco Marques
WAX—185 sx, Turrialba, Havana
53 bgs, Sapinero, Valencia
445 sx, Munplace, Progreso
507 bbls, 642 bgs, Santos, Kobe
1,448 bbls, Mount Evans, Manchester
971 sx, Virginia, Talcahuano

Clearance Dates

Abangarez, August 9
Atenas, August 28
Belridge, August 25
Commercial Guide, August 20
Dictator, August 23
Favorita, September 1
Gorm, September 3
Joazeiro, August 28
Jose, August 28
Christian Krohg, August 15
Laristan, August 28
Melania, August 24
Michigan, August 20
Montoso, August 31
Motrex, August 25
Mount Evans, August 23
Norne, August 25
Olivebank, August 18
Santos, September 1
San Valerio, August 24
Sapinero, August 28
Sinaloa, August 8
Sliedrecht, August 24
Tegucigalpa, August 24
Turrialba, August 21
Varand, August 21
Virginia, August 24

Exports from Norfolk

DEXTRIN—880 bgs, 124,960 lbs, Kearny, Manchester
EXTRACT, CHESTNUT—80,748 lbs, Gerwin, Hamburg
TANNING—103 lbs, Gerwin, Hamburg
TOBACCO—18,779 lbs, Gerwin, Bremen
MICA, GROUND—20,200 lbs, Manchester Corp, Manchester
6,060 lbs, Korsholm, Gothenburg
ROOTS AND HERBS—760 lbs, Manchester Corp, Bradford
2,419 lbs, Bannack, Bradford
3,207 lbs, Nortonian, London
710 lbs, Lorain, Hamburg
3,647 lbs, Kearny, Bradford
815 lbs, Chickasaw, London
STARCH, CORN—440 bgs, 62,040 lbs, Bannack, Liverpool
6,600 bgs, 930,000 lbs, Bannack, Manchester

Exports from Philadelphia

CORK BOARD—529 pkgs, Hiannoy, San Feliu
GASOLINE—20,000 cs, Port Albany, Sydney
1,500 cs, Port Albany, Melbourne
300 dms, Berury, Pernambuco
2,000 cs, Berury, Pernambuco
1,500 cs, Berury, Victoria
KEROSENE—7,000 cs, Berury, Pernambuco
4,500 cs, Berury, Maceio
OIL, COD—6 bbls, Cabo Mayor, Barcelona
COMPOUND—20 bbls, Hinnoy, Marseilles
CYLINDER—459 dms, Port Albany, Sydney
1,000 cs, Port Albany, Sydney
3 bbls, Port Albany, Sydney
412 cs, Port Albany, Melbourne
470 dms, Port Albany, Melbourne
60 cs, 5 dms, Port Albany, Fremantle
50 cs, 40 bbls, Berury, Bahia
150 cs, 60 dms, Berury, Victoria
260 bbls, Korsholm, Gothenburg
63 hf bbls, Korsholm, Gothenburg
225 dms, Korsholm, Gothenburg
95 dms, Korsholm, Malmo
78 bbls, Korsholm, Malmo
20 hf bbls, Korsholm, Malmo
38 hf bbls, Korsholm, Helsingborg
73 bbls, Korsholm, Helsingborg
141 dms, Korsholm, Helsingborg
160 dms, Hinnoy, Marseilles
80 dms, Davisian, Manchester and Liverpool
247 bbls, Davisian, Manchester and Liverpool
OIL, CYLINDER—5 bbls, Cabo Mayor, Santander
150 bbls, Cabo Mayor, Dijon
50 bbls, Cabo Mayor, Vigo
55 bbls, Cabo Mayor, La Coruna
730 bbls, Cabo Mayor, Seville
96 hf bbls, Cabo Mayor, Seville
520 dms, Cabo Mayor, Seville
190 bbls, Cabo Mayor, Cadiz
85 bbls, Cabo Mayor, Malaga
110 bbls, Cabo Mayor, Bilboa
1,314 bbls, Cabo Mayor, Valencia
55 hf bbls, Cabo Mayor, Valencia
100 dms, Cabo Mayor, Valencia
34 hf bbls, Cabo Mayor, Barcelona
206 dms, Cabo Mayor, Barcelona
GAS—500 cs, 61 dms, Berury, Bahia
ILLUMINATING—65 bbls, Bird Cty, Copenhagen
INK—1 bx, Port Albany, Melbourne
LUBRICATING—988 bbls, Bird City, Copenhagen
125 dms, Port Albany, Brisbane
500 cs, Port Albany, Brisbane
100 qr dms, Port Albany, Brisbane
1 hf dm, Korsholm, Helsingborg
1 can (sample), Korsholm, Helsingborg
5 cs, 3 bxs, Korsholm, Helsingborg
25 bbls, Korsholm, Halmstad
137 bbls, Malaren, Stockholm and Helsingfors
15 hf bbls, Malaren, Stockholm and Helsingfors
205 dms, Malaren, Stockholm and Helsingfors
20 hf dms, Malaren, Stockholm and Helsingfors
5 hf cs, Malaren, Stockholm and Helsingfors
100 dms, Hinnoy, Marseilles
MINERAL—1,364 bbls, Hinnoy, Marseilles
20 dms, Hinnoy, Lexioes
246 bbls, Hinnoy, Lexoes
787 bbls, Hinnoy, San Feliu
10 dms, Hinnoy, San Feliu
NEATSFOOT—15 bbls, Cabo Mayor, Barcelona
5 bbls, Bird City, Coepnhagen
TRANSFORMER—15 dms, Korsholm, Gothenburg
15 dms, Korsholm, Malmo
SODA SILICATE—1 stl dm, Sacandaga, Antwerp
WAX, PARAFFIN, REFD—9 cs, Berury, Bahia
26 bgs, Korsholm, Gothenburg
31 bgs, Korsholm, Malmo
51 bgs, Korsholm, Halmstad
81 bgs, Malaren, Riga
500 bgs, Hinnoy, Leixoes
102 bgs, Bird City, Copenhagen
PARAFFIN, UNREFD—84 bbls, Sacandaga, Antwerp

Exports from Port Arthur

ASPHALT—20 dms, 50 bbls, Clearwater, Santos
490 bbls, Clearwater, Rio de Janeiro
GASOLINE—5,000 cs, Clearwater, Victoria
7,000 cs, 485 dms, Clearwater, Rio de Janeiro
10,180 cs, Clearwater, Paranagua
4,000 cs, Clearwater, Sao Francisco
15,430 cs, Clearwater, Rio Grande do Sul
GREASE, LUBRICATING—85 cs, 15 hf bbls, Clearwater, Victoria
25 dms, 180 cs, 100 bbls, Clearwater, Rio de Janeiro
210 cs, 60 dms, Clearwater, Santos
830 cs, 10 kgs, Clearwater, Paranagua
580 cs, 20 bbls, Clearwater, Sao Francisco
10 kgs, 5 crts, Clearwater, Rio Grande do Sul
KEROSENE—5,000 cs, Clearwater, Victoria
13,430 cs, Clearwater, Rio de Janeiro
3,440 cs, Clearwater, Paranagua
500 cs, 275 bbls, Clearwater, Santos
1,000 cs, Clearwater, Sao Francisco
11,500 cs, Clearwater, Rio Grande do Sul
OIL, LUBRICATING—107 dms, 335 cs, Clearwater, Victoria
120 cs, Clearwater, Rio de Janeiro
225 dms, 935 cs, Clearwater, Santos
40 dms, 185 cs, Clearwater, Paranagua
1,190 cs, 50 dms, Clearwater, Sao Francisco
300 cs, 55 dms, Clearwater, Rio Grande do Sul

Clearance Date

Clearwater, August 28

Exports from Seattle

CHLORINE—3 cs, Montana, Shanghai

Exports from Tacoma

ARSENIC—343 bbls, West Nilus, Montevideo
LIME—870 bbls, Roche Harbor, Manila
28,000 sx, Roche Harbor, Iloilo

Containers Returned

New York

BARRELS—166, West India Oil Co, Huron, Macoris
110, West India Oil Co, Huron, Santo Domingo
101, West India Oil Co, Fort Victoria, Hamilton
800 Vacuum Oil Co, Brazil, Hamburg
82, West India Oil Co, Nickerie, Paramaribo
CARBOYS—26, Grasselli Chem Co, Huron, Barahona
5, W L Long, Manaqui, Kingston
CYLINDERS—1, H R Teepe, Huron, Macoris
30, R Fabien & Co, Huron, Macoris
7, Asiatic Petroleum Co, Calypso, Maracaibo
1, Mecke & Co, Calypso, Maracaibo
11, Young & Hyde, Manaqui, Kingston
15, Gillespie & Co, Manaqui, Kingston
35, Raymond Concrete Pile Co, Alvarado, Buenaventura
6, Anglo-American Purchasing Co, Carabobo, Puerto Cabello
13, United Fruit Co, Pastores, Port Limon
6, G W Sheldon & Co, Pastores, Port Limon
65, Tupman Thurlow, Inc, President Adams, Shanghai
12, C H Watts Co, Dominica, Trinidad
6, H P Winter Co, Dominica, Antigua
81, Armour & Co, Sardinian Prince, Buenos Aires
101, H Bower Chem Mfg Co, Fairfield City, Bangkok
36, United Fruit Co, Sixaola, Cartagena
11, Ultramares, Corpn, Sixaola, Cartagena
DRUMS—100, J H Senior, Santa Luisa, Talara
10, Young & Hyde, Santa Luisa, San Juan
30, Kress & Owen Co, American Trader, London
500, Mauser Barrel Co, Rotterdam, Rotterdam
54, General Motor Export Corpn, Lancaster Castle, Batavia
113, Tupman Thurlow Co, Inc, Alegrete, Santos
49, General Motor Export Co, Alegrete, Santos
80, The Texas Co, Dominica, Martinique
54, The Texas Co, Dominica, Antigua
1,000, Mauser Barrel Co, Blijdendijk, Rotterdam

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Current Prices are now printed in connection with the Market Reports. See index, page 2.

Boston

DRUMS, STEEL—179, Gulf Refining Co, Farnorth, St Johns

Philadelphia

CYLINDERS—21, Gaasterdijk, Rotterdam
60, National Ammonia Co, ex Eelbeck at New York, Bombay
DRUMS—20, Henry Bower Chemical Co, Cornelia, San Juan

New Orleans

BARRELS—45, Texas Oil Co, Favorita, Cristobal
DRUMS—48, American Fruit Co, Senator, Bluefields
4, United Fruit Co, Saramacca, Bocas
10, General Carbonic Co, Parismina, Cristobal
42, Bragmans Bluff Lumber Co, Jose, Puerto Cabezas
107, Cuyamel Fruit Co, Managua, Bluefields
67, United Fruit Co, Turrialba, Tela
67, Cuyamel Fruit Co, Copan, Puerto Cortez

Recent Charters

FERTILIZER—385 tons, Sch Peaceland, Boston to Windsor or Wolfville
FLAXSEED—3,322 tons, S S Crofton Hall, South America to Philadelphia, prompt, private terms
OIL CAKE—4,000 tons, S S Inland, Gulf to three ports, $6.50 September loading
1,624 tons, S S Consul Olsson, Gulf to four ports, Denmark, $6.40 October loading
1,341 tons, S S Rheinland, Gulf to three ports, Denmark, $6.50 loading
ORE—4,155 tons, S S Brandon, Bougie to Chester, prompt
2,513 tons, S S Rio Azul, Benisaf to Philadelphia, prompt, private terms
3,460 tons, S S Georgio Ohlsen, Bizerta to Philadelphia, private terms
PETROLEUM, CRUDE—190,000 to 210,000 cs, S S Bosworth, Gulf to Australia, basis 28c late September loading
125,000 cs, S S Craigwen, probably Mexican Gulf to East Coast South America, September loading (London)
6,008 tons, S S Dannedaike, lubricating oil, Gulf to U K-Continent, 20s September, October
3,950 tons, S S Sulton Van Langkat, lubricating oil, Batoum to Rouen, 17s 6d option La Malleraye, August
3,013 tons, S S Riva Ligure, refined and/or spirit, 18s Constanza to two ports, North Spain and/or Casablanca, middle August
8,607 tons, S S Lumina, refined and/or spirit, Constanza to U K-Continent, 31s 9d, October
8,000 tons, S S Virgilia, refined and/or spirit, Batoum to U K, 11s 6d, August September
4,750 tons, S S Wieldrecht, refined and/or spirit, 15s Black Sea to North Spain, option 12s 6d South Spain, September
6,967 tons, S S Jole Fassio, fuel to crude oil, Curacao to U K-Continent, 12s prompt
—— tons, S S —— 12s, Curacao or Aruba to U K-Continent, option 14s Gulf or 14s 6d Tampico loading, October
2,000 tons, S S Atlas, Constanza, Alexandria, 11s 6d, clean, August, September
2,000 tons, S S Marisedda, Constanza, Alexandria, Beyrout Alexandretta one port £1,200, two ports £1,325, three ports £1,425, clean, September
9,000 tons, S S Herman Falk, Peru-Valo, crude oil, 24s, October
4,400 tons, S S Schwarzes Meer, New York or Paulsboro, Lisbon and (or) Oporto 15s, clean, October
PETROLEUM, CRUDE—8,500 tons, SS Ranja, Gulf, United Kingdom, Continent, clean, September
7,700 tons, S S Varg, Constanga, U K-Continent, clean, 11s 6d, October
SODA NITRATE—8,000 tons, S S Chile to Galveston, Boston, range $4.75 Oct, Nov
SULPHUR—8,400 tons, S S Kersten Miles, Gulf to Harburg, $3.60 prompt
5,000 tons, Weir boat, Gulf to Dutch East Indies, 32s last half November loading
7,000 tons, Motorship Oxelosund, Gulf to Rotterdam or Harburg, $3.50 September loading
7,000 tons, S S —— Gulf to Harburg, prompt

Foreign Trade Openings

Correspondence in regard to any of the following foreign trade apportunities should be addressed to the Bureau of Foreign and Domestic Commerce, Washington, or to any district or cooperative office of the Bureau and not to this paper. When writing give the number of the item:—

Agricultural chemicals and animal dips:—Agency; Santa Fe, Argentina (33,036).
Beeswax:—Purchase and agency; Dessau, Germany (33,050).
Beeswax:—Agency; Hamburg, Germany (33,063).
Black, acetylene:—Purchase; Worms, Germany (33,112).
Blue-printing chemicals:—Purchase or agency; Berne, Switzerland (33,002).
Borax, boric acid, cream of tartar, tartaric acid and citric acid:—Purchase or agency; London, England (33,073).
Borax.—Agency; Helsingfors, Finland (33,202).
Borax and bromide salts:—Agency; Brussels, Belgium (33,176).
Carbon dioxide, solid:—Purchase; Tokyo, Japan (33,199).
Chemicals, industrial, especially magnesium silicate and bleaching powder:—Agency; Helsingfors (33,202).
Chemicals and colors, industrial:—Agency; Bombay, India (33,247).
Ceresin:—Purchase or agency; Batavia, Java (33,109).
Chemicals, industrial:—Purchase or agency; London, England (33,073).
Chemical specialties, industrial:—Agency; Athens, Greece (33,075).
Chemicals for the leather industry:—Purchase; Obertschausen, Germany (33,138).
Chemicals for the rubber industry.—Purchase; Para, Brazil (33,072).
Cleaning fluids:—Agency; Guaymas, Mexico (33,096).
Dentrifrices:—Agency; Brussels, Belgium (33,172).
Dentifrices and pharmaceutical specialties:—Purchase and agency; Alexandria, Egypt (33,171).
Drug and toilet specialties:—Agency; Winnipeg, Canada (33,186).
Fertilizer materials:—Purchase; Bombay, India (33,200).
Fertilizers:—Agency; Oslo, Norway (33,113).
Feedstuffs:—Agency; Hamburg, Germany (33,063).
Fishmeal, 1,000 to 1,500 tons monthly:—Purchase; Hamburg, Germany (33,117).
Gasoline and paraffin:—Agency, Hamburg, Germany (33,092).
Kerosene and gasoline in cases.—Agency; Hong Kong, China (33,095).
Lacquers and enamels:—Agency; Dresden, Germany (33,174).
Lacquers, enamels and varnishes, and raw materials for their manufacture:—Agency; Berlin, Germany (33,175).
Medicines, prepared, and toilet preparations:—Agency; Valparaiso, Chile (33,012).
Medicines, prepared, toilet preparations, and dentifrices:—Agency; Jerusalem, Palestine (33,042).
Oxides, metallic:—Purchase or agency; London, England (33,073).
Oils, lubricating:—Agency; Halle, Germany (33,226).
Oils, lubricating and refined, and paraffin:—Purchase and agency; Mogador (33,209).
Oils, lubricating:—Agency; Alexandria, Egypt (33,094).
Oils, lubricating, light:—Agency; Guaymas, Mexico (33,096).
Oil, lubricating, and greases.—Agency; Aguadilla, Porto Rico (33,098).
Petroleum products:—Agency; Para, Brazil (33,097).
Paints and varnishes:—Purchase or agency; Tangier, Morocco (33,255).
Photographic chemicals:—Agency; Alexandria, Egypt (33,234).
Paints, enamel, and varnishes:—Agency; Berlin, Germany (33,076).
Paints, enamels, and varnishes:—Agency; Breslau, Germany (33,074).
Paints, quick-drying, enamels and pyroxylin lacquers:—Agency; Leipzig, Germany (33,077).
Paints and pigments:—Agency; Athens, Greece (33,075).
Paints and varnishes:—Agency; Valparaiso, Chile (33,012).
Paints and varnishes:—Agency; Nantes, France (33,122).
Pigments:—Agency; Osaka, Japan (33,070).
Perfume materials:—Agency; Habana, Cuba (33,120).
Petrolatum, white:—Agency; Cairo, Egypt (33,093).
Pharmaceutical preparations:—Agency; Athens, Greece (33,075).
Rosin:—Agency; Hamburg, Germany (33,063).
Rosin:—Agency; Helsingfors, Finland (33,202).
Soda, caustic:—Agency; Riga, Latvia (33,261).
Soda ash:—Purchase or agency; Toronto, Canada (33,071).
Solvents, powder:—Agency; Guaymas, Mexico (33,096).
Toilet preparations:—Agency; La Chaux de Fonds, Switzerland (33,041).
Toilet and shaving soaps:—Purchase and agency; Alexandria, Egypt (33,171).
Toilet preparations:—Agency; London, England (33,281).

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Business Enters Busy Season

Labor Day is the end of Summer insofar as business is concerned. Although the transition of the seasons in a business sense has become as imperceptible as that recorded on the calendar, there remains a rather widespread belief that business will exhibit an increased activity with the passing of the early September holiday. This belief, as much as anything else, is responsible for the fact that business does speed up somewhat at this time of the year.

The old-fashioned Summer seems to have gone out of fashion, meteorologically speaking. The Summer slump in business, to the recurrence of which all business men at one time were resigned, has likewise become something to be recalled rather than experienced. But, a noticeable improvement in business is still looked for when Summer ends. There is something logical in this expectation. Business men take a vacation. And although this does not mean the closing of their places of business, or even connote an easing of attention to the daily operations of their establishments, business is quieter during the vacation period, for the simple reason that "everybody is out of town." Business goes on as usual. But, there is not so much talk about it, not so much seeing Mr. Blank or telephoning Mr. Dash. It is the incidentals, not the fundamentals of business, in which the comparative quiet of Summer exists.

Now that "everybody is back in town," business shows a greater activity than it did a month ago. Perhaps, in some respects, it is more active. But, it has been active; it has been good right along. It continues good, and it will continue good; because it is the desire of business men that business be good.

Among the changes which have taken place in the attitude of business men toward business during the past decade, none has been more striking, and none has been simpler, than the dropping of the idea that the condition of business depended in some mysterious manner on the effects of certain undefined, dimly recognized external influences. Men gave various names to these influences which they feared chiefly because they did not know what they were or how they operated. "Descending cycles," and "presidential years," and other somethings, created largely by the imagination, were veritable bug-a-boos. And business was swayed by psychology rather than guided by philosophy.

These things have passed. Business has its problems even yet. But, they are problems with a tangible foundation, material problems which are being met in a materially minded manner. So it is that prosperity of a degree never before known has been, and is being, maintained over a period of unprecedented length.

The biggest problem before business today is the adjustment of distribution to the possibilities of low-cost mass production. Consumption has proved itself able to take surprisingly large quantities of the manufactures of a most efficient industrial system. This volume, however, has been marked by a disturbingly small margin of profit for the manufacturer. Much as he has been able to reduce his costs through standardized operations, he has not been able to increase his profits, because he has not arrived at a method of distribution which does not cost more as its capacity increases.

This is a peculiar problem. The business of manufacturing has been developed to real efficiency and shows that almost any measure of greater production could be handled with a continued reduction of costs. The business of distribution, however, seems to have reached the point at which the law of diminishing returns becomes operative. To get more distribution—and the majority need it—a manufacturer is faced with the necessity of paring his profits which are already rather slim. Economists are beginning to ask whether mass production is not rather definitely limited in its possibilities of meeting the needs of a whole people, or even the continuous needs of a material portion of the buying public. Tastes have not been standardized. It is doubtful that they ever will be. At some point, quite obviously, it is the business of business to endeavor to meet the eternal variety of human desires.

This is a material problem. There is nothing mysterious about the wishes of the public, although they are sometimes difficult to understand. It is an internal problem; for the whims and fixed desires of the public are internal to business. It is, therefore, a problem with which business can philosophically deal. Its solution can be approached through economic study, without recourse to incantations or fear of inevitable consequences.

There is another problem before business at the present time, which may turn out to be as far different from its original aspects as has been true of mass production. This other problem is largely one of external factors; although business is not without a part in it. It is the problem of stock speculation and its possible, even probable, effects on the credit structure of the country. Wide differences exist in the opinion of those who have seen fit to comment on the situation in the stock markets. There seems to be a misapprehension relative to the relation of business to the checks on speculation, which have been attempted through increasing the interest rate on money—with but temporary effect, it is to be said. Observers have noted that, when speculation was checked for a time, business showed improvement. This improvement has not carried through now that the trading in stocks has again reached enormous proportions. The objection raised in some quarters against higher interest rates because of an assumed effect of making money dearer to business does not take into consideration the fact that when money was cheap for speculation, business in general could not borrow cheaply; in fact, could with difficulty borrow at all. This problem deserves more attention than it has been getting from business men.

All in all, business is good, in spite of small profits. It will remain good; because business men can see no reason why it should not be kept good. It is largely for them to say what the condition shall be.

Color Restrictions Unwise

In pursuit of the fundamentally wise goal of simplification in industry, certain members of the government agencies having this matter in hand have arrived at the conclusion that color is being wastefully used. The suggestion has been made by the Division of Simplified Practice of the Department of Commerce that a reduction in the number of colors used on manufactured products should be undertaken. It is admitted that this should be done in such a manner as to avoid loss of individuality. But, the practicability of doing so, under existing conditions of production and the influence of style, is rather doubtful.

The paint and varnish industry, a few years ago, adopted a simplified list of colors. The purpose of this step was an excellent one at the time. Since then, however, color has come to play such an important part in industry that it is not certain that the widest possible range in colors would not be more influential in the further expansion of the paint and varnish industry. This has been recognized in the industry, and the suggestion that color, rather than protection alone, might well be made the basis of the paint and varnish manufacturers' sales promotion publicity has been made.

Mass production has not succeeded in eliminating individuality in the tastes of consumers. Changes in design are not particularly economical as a means of meeting individual desires; because such changes and the expectation of such changes arouse what is popularly known as sales resistance. The buyer is not particularly pleased with the knowledge that what he buys today may be made old-fashioned by tomorrow's change in design.

No such antagonism to differences in color exists; because color is strictly a matter of individual preference. The man who buys a green automobile because he likes its color is not disturbed by the fact that his neighbor gets a red car. The woman who, under the influence of the present style, outfits her kitchen with utensils of a canary hue is not envious of her neighbor's pink equipment. Color is a safe means of individuality. And it is unquestionably an efficient one.

Simplification is a good thing. Like all good things, it can be carried too far. Simplification in the lines of manufacture, which are desired as much for their appearance as for utility, and in those which are luxuries is not unqualifiedly wise. The manufacturer of perfumes must give his package individuality, even though the

manufacturer of tack hammers may reasonably be limited to a few differences in the shape of his products. Comparability is not universal.

In seeking to limit the colors of manufactured products, the advocates of simplification approach a *reductio ad absurdum*. They may find that their zeal disproves the wisdom of their purpose. Individuals will have color. They should be enabled to indulge their wildest vagaries in this respect. Industry will profit more by making in color rather than in design the changes which seem to be a necessity of present-day competition. No material addition to costs of production results from changing the color of a product. But, there can be a material difference in its selling appeal.

Quinine Trust Decree Is Accepted by Dutch

Members of Monopoly Agree Not to Restrain Trade Or Control Prices

Acceptance of the consent decree offered the Dutch quinine manufacturers as a medium through which they could bring the conduct of their business within the antitrust and revenue statutes of the United States was announced to the Department of Justice, Washington, in a cable received last week from the Dutch manufacturers of quinine and other cinchona derivatives, represented by S. Van Velzen Camphuis and Arent Roalf Van Linge. Signing of the decree will take place in this country. Subsequently, the quinine now held by the government in its equity, admiralty, and criminal proceedings against the entire Dutch quinine and cinchona industry will be released.

Text of the Decree

The decree taken to Amsterdam by Mr. Camphuis and Mr. Van Linge, following their conference with the Federal officers in the Attorney General's office, Washington, and accepted by the Dutch quinine manufacturers, with minor modifications which in nowise change the fundamentals of the document, is as follows:—

Now comes Charles H. Tuttle, United States Attorney for the Southern District of New York, and come also William J. Donovan, the Assistant to the Attorney-General; Israel B. Oseas, W. Houston Kenyon, jr., Porter R. Chandler and Bethuel M. Webster, jr., special assistants to the Attorney-General, and move the court for relief in accordance with the prayer of the petition herein, and the defendants named in the annexed consent appearing and consenting thereto, and no testimony having been taken it is ordered, adjudged and decreed as follows:—

I—Definitions

(a) That whenever, in this decree, an injunction or restraint is laid upon one or more of the defendants herein, unless otherwise provided, such injunction or restraint shall extend to and be binding upon each and all of the defendants, whether acting jointly or severally, and shall extend to and be binding upon their agents, servants, officers, members, employes, assigns and successors in interest, and all persons acting by, through, under or on behalf of or in co-operation with any of them, or claiming so to act, whether or not impleaded herein.

(b) Unless otherwise stated, the word "person," as used in this decree, shall be deemed to include persons, firms, corporations and associations.

(c) Whenever any person is forbidden to do any act or thing, or to reach any result, such prohibition shall be construed to be an injunction against attempting singly or in concert with each other or others to do the act or thing or to reach the result forbidden by any means; and against agreeing with each other or with others to achieve the result or to do the act or thing forbidden; and against causing, persuading or coercing in any manner any person whatever in any way to do any act or to achieve any purpose herein forbidden and/or declared to be illegal.

II—Jurisdiction

This court has jurisdiction of the subject matter of the controversy herein and of the parties, and the petition states a cause of action under the act of July 2, 1890, c.647, section 73 of the act of August 27, 1894, c.349, and sections 2 and 3 of the act of October 15, 1914, c.323. The combination and arrangements and the restraint attained thereby (so far as hereinafter prohibited) are hereby declared to be illegal and in violation of the statutes above named.

III—Injunction

The defendants are perpetually enjoined, restrained and prohibited from—

(a) Fixing or maintaining resale prices, resale terms, resale discounts, resale allotments of territory or any resale restrictions or conditions whatever with respect to quinine derivatives sold to persons in or held within the United States.

(b) Restraining, preventing or hindering in any way the shipment and/or sale in the United States and/or the shipment or sale to, into or from the United States of cinchona bark and /or quinine derivatives, except as provided in paragraph (f) following.

(c) Participating in any arrangement for the pooling or division of profits or territory with respect to or in consideration of any sales made within the United States.

(d) Discriminating in any way in sales made within the United States between purchasers of quinine derivatives located within the United States when such discriminations are not based on:

(1) Differences in quantities purchased;
(2) Differences in costs of delivery;
(3) Differences in competitive conditions in a particular locality;
(4) Differences in grade or quality.

But no such discrimination shall be made for the purpose of restraining or destroying the trade of any competitor.

(e) Maintaining in force or carrying out within the United States any existing contracts or entering into or carrying out within the United States any new contracts or course of business on the conditions, agreement or understanding that purchasers of cinchona bark and/or quinine derivatives shall purchase such bark and/or quinine derivatives only from the contracting party or parties, or shall not use or deal in the products sold by a competitor.

(f) Provided, however, that nothing herein contained shall be construed to restrain or prohibit any defendant from doing any act or entering into any agreement which is entirely completed outside the United States and which does not require any act or thing to be done within the United States.

IV—Appeal for Relief

Any defendant herein, or the Attorney-General of the United States, shall have leave to apply to the court for relief upon his petition that any plan, contract or course of business entered into pursuant to this decree is in violation of the provisions of said decree.

Jurisdiction of this cause is hereby retained by this court for the purpose of taking such action as may become necessary and appropriate for the carrying out and enforcement of this decree and for the purpose of entertaining at any time hereafter any application which the defendants may make with respect to this decree.

Probe Begun in 1927

The Department of Justice began in 1927, in this city, an investigation into the matter of alleged violations of the antitrust laws in the marketing of quinine. Certain sales policies and practices of the Dutch quinine manufacturers had been brought to the attention of Herbert Hoover, then Secretary of Commerce. The informant in this instance pleaded for relief from acts which, he alleged, militated against his business and threatened its ruin unless he conformed to certain requirements of the Dutch manufacturers. These requirements were repugnant to him, he declared, and, in fact, would have subjected him to prosecution by the government had he conformed to the proposals.

Schieffelin & Co., wholesale druggist, this city, also complained to Washington, declaring that the monopoly of the Dutch manufacturers permitted them to grant special discounts and terms which were not obtainable by all houses whose purchases involved identical quantities of cinchona derivatives. These discounts were granted to certain houses and not to others, and the quantity of quinine purchased was not always the governing factor in alloting the discount to be granted to any individual concern.

Different Discounts

Broadly expressed, the discounts of the Dutch agents in this city were on a basis of 10 and 5 percent, depending on buyer. A fairly representative and nearly complete list of buyers and the discounts granted them is as follows:—

Ten Percent Discount—McKesson & Robbins, New York; Sharp & Dohme, Baltimore; Eli Lilly & Co., Indianapolis; H. K. Mulford Company, Philadelphia; Upjohn Company, Kalamazoo, Mich.; Parke Davis & Co., Detroit; United Drug Company, New York and St. Louis; Norwich Pharmacal Company, Norwich, N. Y.

Five Percent Discount — Schieffelin & Co., New York; John Wyeth & Bro., Philadelphia; Nelson, Baker & Co., Detroit; Frederick Stearns & Co., Detroit; William S. Merrell Company, Cincinnati.

The name of McKesson & Robbins was stricken from the list of ten-percent discounts last summer when the company refused to abandon its sales policy, which included the sale of large quantities of

(Continued on page 73)

Oklahoma Oil Restriction

TULSA, Sept. 8, 1928.

The Oklahoma Corporation Commission will issue at noon today an order restricting crude petroleum production for the State at 700,000 barrels daily, effective Monday, Sept. 10. The order includes the Little River and St. Louis pools.

Trade News Briefs

O. N. Davis, manager of the Chicago branch of the U. S. Industrial Alcohol Company, has returned from a vacation and rest at Eagle River, Wis.

C. W. Dill, vice-president of the Columbia Naval Stores Company, New York, left September 8 for a visit to the Savannah office of the company.

Irving Post, vice-president and general manager of the Naval Stores Marketing Corporation, Savannah, was in this city during the week of September 3.

The regulation issued by the Cuban government requiring consular invoices to be written in Spanish, effective September 1, has been suspended until January 1, 1929.

Harry E. Martin, formerly New York sales manager for the American Linseed Company, has joined the firm of H. J. Jackson, broker in linseed oil, 25 Beaver Street, this city.

R. G. Pendleton, formerly assistant general sales manager for the American Linseed Company, this city, is now connected with the New York office of the Archer-Daniels-Midland Company as assistant to G. H. Tomlinson.

Dr. William Quitt, dentist and manufacturer of toilet articles, Baltimore, brought suit September 5 in the superior court against Federal prohibition officials asking $100,000 damages because of a recent revocation of his permit to withdraw alcohol for his business.

The firm of E. de Haen A. G., Seelze, Hanover, Germany, has combined with the firm of J. D. Riedel Akt. Ges. and will be known in future as J. D. Riedel —E. de Haen, A. G. There will be no change in the business or policy of this firm. The E. de Haen works will continue to be represented in the United States and Canada by Pfaltz & Bauer, Inc., this city.

Manganese Producers to Convene at Washington

WASHINGTON, Sept. 7, 1928.

The American Manganese Producers' Association, organized about a year ago, will hold its first annual convention at the Mayflower Hotel September 10 and 11. The program follows:—

Monday, September 10

9 a. m.—Registration of delegates. Chairman, Francis P. Sinn, New Jersey Zinc Company.
10 a. m.—Subject, State of the Manganese Industry.
(a) Address of Welcome, J. Carson Adkerson, president, American Manganese Producers' Ass'n.
(b) State of the Industry. (Reports from representatives from manganese producing districts.)
1. Arkansas.
2. Montana.
3. Alabama.
4. Virginia.
5. Georgia.
6. Minnesota.
7. New Mexico.
8. Washington.
9. Idaho.
10. Colorado.
11. Tennessee.
12. California.

2 p. m.—Chairman, Robert Dwyer, Anaconda Copper Mining Company. Subject, Recent Developments in Manganese Treatment.
(a) Use of Manganese in Fertilizer. By Dr. Oswald Schreiner and Dr. J. J. Skinner. U. S. Department of Agriculture.
(b) Work of Minneapolis Station, U. S. Bureau of Mines, In Treatment Manganiferous Iron Ores. By T. L. Joseph, Superintendent U. S. Bureau of Mines.
(c) Work of Domestic Manganese & Development Co. in Treatment of Rhodocrosite Ores. By Representative, Anaconda Copper Mining Company, Butte Montana.

4:30 p. m.—Business Meeting.
7:30 p. m.—Informal Dinner, Mayflower Hotel. Toastmaster, Herbert Wilson Smith, Union Carbide and Carbon Company, New York.
Address, Strategic Minerals, Major Roger W. Taylor, War Department.

Tuesday, September 11

10 a. m.—Chairman, A. J. Seligman, Butte Copper & Zinc Company. Subject, Types of Manganese Deposits.
(a) Manganiferous Iron Ore in Minnesota. By Carl Zapffe.
(b) Types of Deposits, Their Use, and Method of Treatment. By D. F. Hewett, U. S. Geological Survey.
(c) Types of Deposits in Virginia. By Dr. J. S. Grasty.

2 p. m.—Chairman, Richard H. Brown, Manhattan Electrical Supply Company. Subject, Economic Aspects of Manganese Industry.
(a) Why Development of Domestic Manganese Industry Should be Fostered. By A. H. Hubbell, Engineering and Mining Journal.
(b) Grades and Character of Ore Desired By Market. By John J. Howard, E. J. Lavino & Co.
(c) Financing Development of Manganese Reserves.

New York Paint Golfers Play Canoe Brook Next

The next tournament of the "Save the Surface" Golfers of the Paint, Oil and Varnish Club of New York will be held September 12 at the Canoe Brook Country Club, Summit, N. J. Henry G. Sidford, of the National Lead Company, will be the host.

D. L. & W. trains leave Hoboken for Summit at 8:20, 9:15, and 11.00 a. m., and 12:15 p. m. (twenty minutes earlier from New York). The Canoe Brook club may also be reached from Short Hills on the D. L. & W. Taxicab service connects the club with both stations. The motor route is by way of Springfield avenue out of Newark, and Morris turnpike from Springfield, two miles.

Chicago Paint Meetings

CHICAGO, Sept. 6, 1928.

A meeting of the Paint and Wall Paper Dealers' Association of Chicago at the City Club, September 10, will open the Fall paint association season. The meetings of all the trade organizations have been suspended through the Summer.

The Chicago Paint, Oil and Varnish Club will meet late in the month at a date to be decided upon. The "Save the Surface" Salesmen's Club will meet September 20 at the Midland Club. The Paint and Varnish Superintendents' Club of Chicago plans to meet at the Engineers' Club September 17. At each of these meetings a dinner will precede the business session. The salesmen's club, at its September meeting, will be the guest of H. S. Bickford, sales manager for the Standard Varnish Works.

Paint Census Data Lacking

WASHINGTON, Sept. 7, 1928.

The matter of discontinuing the semi-annual paint and varnish census or of revising and simplifying it still rests with the trade itself. The Bureau of the Census has received very few constructive suggestions from the trade in reply to its circular letter asking the views of manufacturers.

Data on paint and varnish manufacturing during the recently ended half-year have been coming in even more slowly than in the past, and the bureau believes that many manufacturers interpreted the bureau's letter as meaning that they need not return the current census blanks. Many manufacturers have given the bureau the desired information but have indicated that they would prefer to have the census discontinued. The bureau has suggested that the trade might be benefited by a shorter and more simple census taken more frequently, but is still waiting further reaction from the industry before making any decision.

Oil Freight Hearings Will Start Wednesday

CHICAGO, Sept. 6, 1928.

What is expected to be one of the most important petroleum freight rate battles in a long time is scheduled to be opened at Kansas City, Sept. 12, before an examiner of the Interstate Commerce Commission, involving charges on movement of oil products from the Midcontinent into territory west of the Mississippi River, particularly into Nebraska and South Dakota. The Kansas City hearing will be followed by one at Chicago Sept. 26 and others later this fall.

The Kansas City hearing will have principally to do with rates into Nebraska, involving a reopening of the A.B.A. Independent Oil and Gasoline Company case, and also as result of a complaint more recently filed by White Eagle Oil and Refining Company, asking for relief in a more direct and cheaper route to many western Nebraska points.

The Chicago hearing will be centered in a fight by leading Midcontinent refiners with Midwest Refining Company, seeking to revise rates from Casper, Wyo., as they compare with rates from Oklahoma to consuming centers in the western part of Standard Oil Company of Indiana territory.

Western railroads serving the Casper oil traffic made the rates effective under protest, but the Chicago and Northwestern and the Chicago, Burlington roads later published tariffs reducing the Wyoming rates to a point where they again would be under those allowed from Oklahoma. Protest of Midcontinent refiners caused the putting of the rates into effect to be suspended from August 15, 1928, to March 15, 1929. Midcontinent refiners petitioned suspension into South Dakota only but the commission went farther and suspended the changed rates into North Dakota, Montana, Iowa, Nebraska and Minnesota.

Obituaries

Charles F. Hills

Charles F. Hills, founder of the Wright & Hills Linseed Oil Company, Chicago, died August 30 at his home in that city. He was eighty-three years old and widely known in the trade, having been actively associated with the company he established for more than forty years. Mr. Hills was born in Baltimore in 1845. He served in the Civil War, being one of the youngest troopers. He was past commander of the military order of the Loyal Legion, and a member of the Thomas Post, G. A. R. He also held membership in the Union League Club.

His widow, Mrs. Mathilde T. Hills, and a daughter, Mrs. Leroy T. Woodland, Kenilworth, Ill., survive. Burial was at Rosehill Cemetery, Chicago, with a military service at the chapel.

Thomas W. Connor

Thomas W. Connor, former chairman of the board of directors of the Ditzler Color Company, Detroit, died August 23 in the Mayo Bros. hospital, Rochester, Minn., from pneumonia, following an operation. He was sixty-four years old.

Mr. Connor was born in 1864 at Fenton, Mich. In 1888 he joined the Detroit White Lead & Color Works and worked his way up to the position of sales manager. In 1913 he joined the Ditzler organization as president and in 1923 became chairman. He retired last May and had made his home in California. A widow and two sons survive.

Carl Merz

Carl Merz, secretary of the Heller & Merz Company, dyestuffs, this city and Newark, died September 1 at his home in Newark after a year's illness. He was seventy-one years old.

Mr. Merz was born September 22, 1857, at Philadelphia and came with his family to New York when a boy. After completing his education in private schools and a military academy, in 1880, he joined the Heller & Merz Company, founded by his father. He had been secretary of the company since 1887. Mr. Merz was a thirty-second degree Mason and a Shriner. A widow and two brothers survive.

Obituary Notes

R. W. Althisar, director of advertising and sales for the White Wonder Chemical Company, proprietary medicines, Montgomery, Ala., died August 28 in a hospital there. His widow and a daughter survive.

George S. Phemister, purchasing agent for the American Cyanamid Company, Niagara Falls, Ont., for the past sixteen years, died September 2 at his home in that city. He had been a member of the Niagara Falls Board of Education and was active in fraternal circles in his community. The funeral was held on September 5 at Niagara Falls.

William Otho Thomas, until two years ago a resident of Sudlersville, Md., where he was engaged in the fertilizer business, together with several other lines, and formerly president of the Sudlersville Bank of Maryland, died at his home in Philadelphia, August 30. He was sixty-nine years old. His wife and a son survive.

Fertilizer Trade Holds Conference at West Baden

WEST BADEN, Ind., Sept. 6, 1928.

The Second National Fertilizer Conference closed its two-day meeting here today after considering many pertinent problems affecting the relationship of the fertilizer industry with the farm press, State and Federal agricultural workers, farm organizations and state inspection and control officials. In general, the conference caught up the tag ends of the first conference held a year ago at Louisville, took steps to make its previous recommendations effective, and launched several projects of value to agriculture. The attendance of 95 persons, 12 more than last year, exceeded expectations. Five sessions were held beginning Wednesday forenoon.

Dr. Tait Butler, editor of the "Progressive Farmer," Memphis, was re-elected chairman of the conference, and Harry C. Butcher, managing editor of the "Fertilizer Review," Washington, was chosen secretary.

Impetus was given to the movement to increase appropriations for research in fertilizers by a resolution of the conference, and the chairman was directed to appoint a committee to study and report on a comprehensive national research program on fertilizers.

Other resolutions called on the joint committee on "fertilizer application" to arrange for national and regional demonstrations by manufacturers of fertilizer distributing machinery. The conference will lend support to the effort to secure from interested groups a suitable fund for conduct of public demonstrations.

In view of the pressing need of a complete review of data regarding the influence of fertilizers on the composition, quality, and feeding value of crops, and particularly because improved quality should bring the farmer higher prices, a resolution was adopted requesting the committee on fertilizers of the American Society of Agronomy to digest the available literature and prepare a report in co-operation with the National Fertilizer Association.

Practical field experiments by experiment stations and other agencies were encouraged as a means of learning more of the large number of new nitrogen-carrying plant food materials now on the market.

Further study was recommended on the function and importance of calcium, sulphur, manganese, boron, iodine, magnesium, copper and other elements, some of which are not now applied to soils but for which there may be need. In view of the necessity for educational work and in some instances for securing modification of existing laws and regulations of States with reference to the expression of plant foods in the approved order of nitrogen, phosphoric acid and potash, the necessity of similar action to bring about adoption of the term nitrogen instead of ammonia, as well as universal use of the term, superphosphate, and uniform printing of bags, a resolution was passed directing the chairman to appoint a committee to co-operate with the National Fertilizer Association to aid in obtaining changes desired to secure uniformity. The term, acid phosphate, is to be dropped entirely, and the term, superphosphate, to be used in its place without reference to the old term. Co-operation was requested from all groups which have helped this change make remarkable progress since the movement was started by the first conference a year ago.

Control officials and others in charge of reporting sales of fertilizer in the several States were urged in another resolution to summarize their statistics not only in terms of total tons of each analysis, but also in number of tons each of nitrogen, phosphoric acid and potash sold in each State.

Opposition to the use of fractional units in fertilizer analysis, voiced by the conference last year, was reaffirmed. Chairman Butler was requested to continue to serve. Whether another conference will be held next year was not decided, though many felt one should be held every year or two years.

Charles J. Brand suggested a meeting in connection with fertilizer conventions to save traveling by the industry's executives. That the conference was well worth while and significant in many ways was the general opinion. No action was taken on advertising, though this was strongly advocated by editors and others.

Hundred Year Club Has Members from Drug Trade

The One Hundred Year Club of New York Business Organizations was organized September 6 at a dinner meeting in the Hotel Plaza. Representatives of nearly 100 firms in this city eligible for membership were present. Isaac Liberman, president of Arnold Constable & Co., who called the meeting presided.

At the conclusion of the dinner Mr. Liberman was authorized to appoint a committee of five to examine the proposed constitution and by-laws of the club and report at a later meeting to be called by him.

Among those present from the chemical, drug and allied trades were William J. Schieffelin, jr., Schieffelin & Co.; Francis T. Dodge, Dodge & Olcott Company; William Koester, Joseph Dixon Crucible Company; H. V. Phillips, McKesson & Robbins, Inc.; DeLancey Kountze, Devoe & Raynolds Company; and George M. Gales, Louis K. Liggett Company.

Sodium Silicofluoride Duty Is Placed on Higher Basis

WASHINGTON, Sept. 6, 1928.

President Coolidge August 31 issued a proclamation changing the basis of the ad valorem duty of 25 percent on sodium silicofluoride from the foreign market value to the American selling price.

The proclamation was based on a report made by the United States Tariff Commission, following investigation asked by the Oconee Alkali Company, Athens, Ga., and the Southern Alkali & Chemical Company, Savannah. The commission found that the duty of 25 percent ad valorem is not sufficient to equalize the costs of producing sodium silicofluoride in the United States and in Denmark, the principal competing country. Domestic consumption averages about 5,000,000 pounds per year, and imports have ranged from 2,000,000 pounds to 3,000,000 pounds per year during the last four years.

Under section 315 of the tariff act of 1922, the President has power to increase duties by 50 percent when necessary to equalize domestic and foreign production costs, but where this increase is still not sufficient to offset the differences in costs the President is authorized to change the basis of ad valorem duties from foreign value to domestic selling price of comparable American articles, as was done in this case.

France Admits German Dyes Without License

WASHINGTON, Sept. 5, 1928.

August 15 was the latest date, in accordance with the London agreements, for the importation of German synthetic chemical products into France free of duty as reparations in kind. Importations in excess of reparations quotas, up to that time, were subject to licenses. With the termination of the reparation period, according to information received by the Department of Commerce from the trade commissioner at Paris, the French government has ruled that all German chemicals previously subject to the conditions of the reparations agreement would be admitted without license, at the minimum prevailing tariff rate.

Notice of this ruling has been issued by the French Ministry of Commerce as follows:—

The London agreements fixed August 15, 1928, as the latest date up to which orders for dyestuffs and for synthetic pharmaceutical chemical products could be imported from Germany as reparations in kind under the conditions provided in article 2 of the law of November 7, 1919, that is to say, free of duty.

On the other hand, in conformity with the provisions of the signature protocole of the Franco-German commercial accord of August 17, 1927 (Ad. art. 12), the dyestuffs and other synthetic chemical products enumerated in the said protocole, the importation of which in excess of the quantities admitted under the heading of reparations was up to this time still subordinated to the formality of a previous authorization, will be dispensed of this formality, beginning August 16, and they can be imported under the conditions of the tariff in force without being accompanied by import licenses.

From the foregoing provisions, it follows, therefore, that the dyestuffs and chemical products the importation of which was up to this time subjected to the conditions imposed by article 2 of the law of November 7, 1919, may, beginning August 16, 1928, be admitted freely into France on payment of the minimum tariff rate now in force.

Meyer Brothers Avows Purpose of Independence

The Meyer Brothers Drug Company, wholesaler, St. Louis, declares, in an announcement to the retail drug trade, September 1, that "it does not purpose to be owned by any chain of wholesale druggists or manufacturers. We are," says the company, "and we shall continue to be, an independent wholesale drug house."

In support of its decision to remain out of existing and proposed combinations in the drug trade, the St. Louis wholesale house says:—

We firmly believe in the future of the independent druggist, whether retailer or wholesaler, and while we recognize the right of others to their own opinions, it is our firm conviction that the establishment of chains such as the above, and their logical outcome, the chain of manufacturers, wholesalers, and retailers, is not for the best interest of the retail drug trade.

Trade News Briefs

The Grodzisk-Hajnowka combine of Polish producers of wood chemicals is re-financing with the assistance of the National Economic Bank of Poland.

Costa Rica has reduced the import duty on talcum powder and other absorbent powders from 10 colones to 6 colones per gross kilo.

J. Webb, with W. J. Bush & Co., essential oil dealer, this city, returned recently from a summer spent in London in conference with officials of the parent company.

De Lancey Kountze, previously treasurer of the Devoe & Raynolds Company, this city, has been elected chairman of the board to succeed I. W. Drummond, resigned. A. T. Stephan has been elected treasurer. S. E. Brokes has been made a member of the board of directors.

J. E. Johnson, for the past nine months Cleveland district manager for the American Linseed Company, will be associated, from September 10, with A. P. Mason in the Cleveland office of Spencer Kellogg & Sons, Inc. Mr. Johnson had been with the American Linseed Company for seventeen years.

The Owl Creek Phosphate Mining Company, Lakeland, Fla., has filed a complaint with the Interstate Commerce Commission attacking the freight rates on carload shipments of phosphate rock from its mines at Benotis, Fla., to Anniston, Ala., and other points in Alabama, Georgia and other States. It is declared that the rates are unreasonable and are not in line with rates from phosphate producing points in Tennessee and southern Florida.

Society of Chemical Industry Holds Its Annual Meeting in New York

British Delegation Winds Up Industrial Tour at Business and Technical Sessions—Little Installed as President

The two weeks' tour and annual meeting of the Society of Chemical Industry in this city was brought to a close September 7 with an all-day excursion by boat to West Point. Most of the 150 members of the British delegation sailed for home September 8 on the "Celtic." The meeting was the first held in the United States since 1912.

The tour of the British delegation was arranged by the American Institute of Chemical Engineers, under whose guidance the party visited various industrial centers and plants starting from Quebec, August 19, and arriving at New York, September 2. From September 3 to the end of the meeting the British party was entertained by the American section of the Society of Chemical Industry.

The annual meeting of the society was opened September 3 with a few words of greeting by Dr. L. V. Redman, chairman of the American section. All meetings, both business and technical, were held in Rumford Hall, Chemists' Club, this city. The rest of the day was spent in sight seeing.

The annual business meeting was opened September 4 with Francis H. Carr, president, in the chair. Mr. Carr read his annual address and various routine reports were rendered.

The balance sheet of the society showed income of £24,586 for the year ended December 31, 1927, with expenditures of £23,765, leaving a balance of £821 to be added to the previous surplus of £17,455. The Messel Fund accounts showed assets of £24,113.

All through the business proceedings, every British member who had anything to say waxed eloquent in speaking of the hospitality shown the visitors.

The afternoon of September 4 was devoted to a technical session and the evening to the presentation of the Messel Medal to Dr. Robert A. Millikan, director of the Norman Bridge Laboratory of Physics at the California Institute of Technology, who read a paper on "Available Energy."

Messel Medal

Dr. Millikan, in the course of his Messel Memorial address on "Available Energy," said that he is satisfied that he is now able to state which atoms are now being made in the regions of space between the stars. Following the discoveries of Einstein and Aston, the formation of helium, oxygen, silicon and iron he held can only result from such penetrating power as he has observed in cosmic rays produced artificially. He has gone further and worked out the power of penetration such rays must possess to permit the formation of the elements indicated.

Very recent experiments carried out by Dr. Millikan indicate to him that such rays are not of the same uniformly short wave lengths, nor are they uniformly spread over a range of wavelengths, as is light from a white hot poker. In point of fact, there are four separate bands in their spectrum, the shortest and most penetrating wavelengths being able to go through 18 feet of lead or 200 feet of water.

In the course of his address Dr. Millikan stated that millions of years ahead the chief constituents of the earth will be just the same as they are today: hydrogen, oxygen, silicon, and iron. He scorned any idea that scientists, in attempting to split up the atom, may initiate atom-splitting on a gigantic scale, and cause the world to break up into thousands of billions of fragments. He believes it utterly impossible even to take the immense quantities of hydrogen that exist in the form of water in the oceans of the world, and by gathering the atoms, form heavier elements, notably helium, oxygen, silicon, and iron. The indications of the cosmic days are that these atom-building processes can only take place under conditions of temperature and pressure existing in interstellar space, he said. It is only in such spaces that rays of the necessarily immense penetrating power can be available in sufficient volume.

September 5 was devoted to trips to the plants of the Corn Products Refining Company, Standard Oil Company of New Jersey, and Procter & Gamble Company. The technical sessions were resumed September 6 and the annual dinner was held that evening in the Hotel Commodore.

Annual Dinner

The annual dinner, the evening of September 6, at the Hotel Commodore, saw the installation of Dr. Arthur D. Little as president, and the interchange of courtesies between British members of the society and members of the American section.

Marston T. Bogart, professor of organic chemistry at Columbia University, was toastmaster. The speakers included Dr. Little, Francis H. Carr, retiring president; Sir Alextander Gibb, and Montrose Strassburger, who represented Mayor Walker.

The dinner speeches were, in effect, a sort of exchange of compliments, the British speaker expressing his thanks and appreciation of the delegation's treatment in the United States and the Americans praising British advances in chemistry and science.

The next annual meeting will be held at Manchester, England.

Address of the President

The annual address of Francis H. Carr, president of the Society of Chemical Industry follows:—

It was my natural wish to choose as a subject for the address expected of the retiring president some department of the field of chemistry in which I have chiefly worked. This, however, is the second year that I have occupied this chair. I have already spoken many times on matters relating to the chemistry of medicinal substances, including the occasion of my address a year ago, and on this special occasion when we are meeting as the guests of the citizens of another nation it would seem more appropriate that I should speak on some subject of a character which will enable me to touch more broadly on national activities.

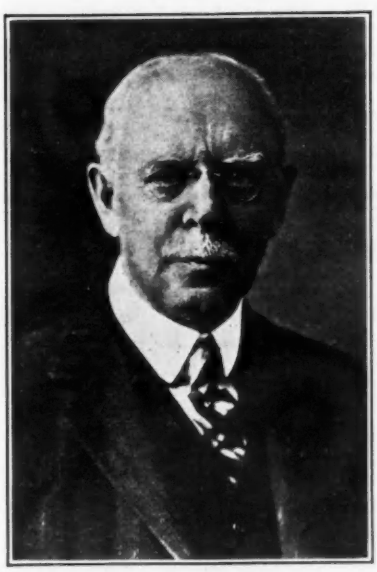
Sixteen eventful years have passed since we last met in New York—years marked by great advance in applied chemistry, and in which the foundations have been laid for even greater development in the future.

The period of war which has intervened has left to mankind a residue containing many by-products, some of which may contribute greatly to human betterment, whilst others continue to impede progress. It provided many remarkable examples of the truth that very great achievements may result where men unite for the attainment of one commonly accepted object; and nowhere was this truth more manifest than in the scientific and technical experimentation promoted by the needs of war.

Workers in science needed no war to convince them of the value of unified effort, yet the war justified and strengthened their belief in its value; and we British members of the Society of Chemical Industry have come to New York filled with a desire thus intensified to exchange experiences and advance knowledge. We come, too, moved by the same fraternal instincts that influenced those who represented the society when we met in New York in 1904 and 1912, and with the additional respect due to the American nation for the many achievements in applied science with which it has enriched the world during that interval.

We share with you now, as we did then, an enthusiasm for, and a belief in, the prosecution of research for the acquisition of knowledge for its own sake, albeit, as industrialists, we are chiefly concerned with more directly purposeful forms of research. Since we last met a great development has been made, both in your country and in ours, in the organiza-

(Continued on page 50)



Dr. Arthur D. Little
New S. C. I. President

Dr. Arthur Dehon Little, newly elected president of the Society of Chemcal Industry, is president of Arthur D. Little, Inc., chemical engineer, Cambridge, Mass.

Dr. Little was born December 15, 1863, at Boston, the son of Thomas J. and Amelia Hixon Little. Following his graduation from the Berkeley School, New York, he took a special course in chemistry at the Massachusetts Institute of Technology with the class of 1885. Mr. Little spent a year as chemist and later superintendent for the Richmond Paper Company, Rumford, R. I., and in 1886 became junior partner in the firm of Griffin & Little, consulting chemists, Boston. This connection continued until 1893 when Mr. Little went on his own as a consultant. In 1909 he formed his present company, Arthur D. Little, Inc. He is also president of the Petroleum Chemical Corporation.

In 1918, he was given an honorary degree of doctor of chemistry by the University of Pittsburgh. Dr. Little is a director of the Boston Chamber of Commerce, life member of the corporation of the Massachusetts Institute of Technology, member of the American Chemical Society (president 1912-1914), member of the American Institute of Chemical Engineers (president 1919), vice-chairman of the Engineering Foundation, member of the division of engineering and industrial research of the National Research Council, chairman of the Committee on Economy of Fuel and Economy of Raw Materials of the International Chamber of Commerce, member of the British Chemical Society, Society of Chemical Industry, American Electrochemical Society, American Petroleum Institute, British Institution of Petroleum Technologists, American Society of Mechanical Engineers, American Institute of Mining and Metallurgical Engineers, American Association for the Advancement of Science, and American Academy of Arts and Sciences.

His clubs include the Bankers and Chemists, New York; Country, Brookline, Mass.; Examiner, Odd Volumes, Merchants, St. Botolph and Union, Boston.

Dr. and Mrs. Little, who was Miss Henrietta Rogers Anthony before their marriage at Boston, January 22, 1901, make their home at Brookline, Mass.

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6. Importance of Temperatures in the use of Chemicals for Hastening the Sprouting of Dormant Potato Tubers—*American Journal of Botany—June,* 1928, *Vol.* 15, *pp.* 395-404.

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Consuming Manufacturers Increase Operations for Fall and Winter Runs—Markets Steady —Building Volume Still Large

With the vacation season out of the way and manufacturers of paints, varnishes, enamels and allied products speeding up their operations for the fall and winter seasons, there was some revival of interest in the materials branch of the market last week. Price changes were few and of relatively minor importance, the general market position being rather steady.

Strength in pig lead during the past few weeks has had an important influence upon the demand for dry lead pigments and oxides, and there has been considerable buying of these products in anticipation of an early advance in prices. Another 10-point gain in the price of the metal will bring about an increase of ¼c. a pound on dry red lead in casks, commercial powdered litharge in casks and American orange mineral in casks. While no further general advance in the lead metal market developed last week, it was reported that a mark-up was imminent, owing to the sold-up condition of the market for prompt lead. Weakness in the position of the London market, it was believed, was principally responsible for deferring an advance in domestic prices.

More buying interest had developed in varnish gums during the week, and importers reported a material increase in inquiry. Varnish manufacturers have been making considerable progress in developing the demand for flat varnishes further, and quick drying finishes also continue to meet with wide distribution.

Sellers of paint and varnish materials are basing their expectations for a continued heavy volume over the remainder of the year on the heavy building program now under way. Considerable new construction started during the summer months is now reaching the finishing stage, and this will naturally require large quantities of paints, varnishes and other finishes. Reports from leading manufacturers of paint and varnish products have indicated a substantial volume of business thus far in the year—running well in excess of that for the comparable period in 1927 in many instances—and most interests in the trade are inclined to look for a continuance of this condition over the balance of the year.

Contracts awarded in the Metropolitan area for the month of August amounted to $107,523,900, according to the Dodge Corporation report. Although this total is 11 percent less than August, 1927, the total for the first eight months of this year is $1,019,000,800 as compared with $939,004,400 for 1927, representing an increase of 8 percent. Educational projects showed the largest percent of increase over 1927, and residential buildings the greatest dollar-volume of increase amounting to $110,797,300. The largest decrease occurred in commercial buildings. The table below shows comparative figures by classes for the first eight months of 1928 and 1927.

	First 8 months 1928.	1927.
	(In thousands of dollars)	
Commercial buildings	$160,967	$192,725
Educational buildings	39,558	23,386
Industrial buildings	23,531	21,861
Public works and utilities	119,043	113,005
Residential buildings	616,665	505,867
All others	59,217	72,161
Totals	$1,019,001	$939,005

New projects contemplated increased slightly during the last week of August, bringing the total for the month up to $150,623,700 as compared with $159,759,100 for August, 1927. The total since the first of the year, however, shows an increase of 38 percent over the same period of 1927, being $1,775,798,000 for 1928 as compared with $1,282,377,500 for 1927.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
Casein, domestic, 20-30 mesh, ¼c. per lb.	Copal, Congo sorts, ¼c. per lb.
Copal, E. Indian pale bold, ½c. per lb.	Kauri, extra brown chips, 2c. per lb.
Manila pale chips, ¼c. per lb.	Ordinary chips, 1c. per lb.
Lead metal, E. St. Louis, 0.02½c. per lb.	White dust, ordinary, 1½c. per lb.
	White chips, ordinary, 3c. per lb.

Comparative Values

Index numbers compiled from eleven typical paint and varnish materials on the basis of a normal of 100 for August 1, 1914, compared as follows:—

Last week.	Prev. week.	Last month.	Last year.
151.1	151.1	151.1	153.2

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Current prices on paint and varnish materials, formerly printed on pages 3 and 4, are now printed at the end of this market report.

Metallic Lead and Zinc

Strong markets for pig lead prevailed last week. September production was well sold up, and buyers were reported bidding premiums for prompt lead in some instances. The market at East St. Louis firmed up 2½ points to 6.25c. a pound, but no general change in the local market developed. Talk of an advance in the price basis here was heard during the week, and it was thought that the only bar to action along this line was the slight easing off in the position of the London market.

Inquiry for slab zinc continued along routine lines during the week. Prices held about steady, and producers were looking for an early increase in volume. Many domestic consumers, it was reported, are understocked, having been out of the market for the past few weeks in an effort to force prices to lower levels.

Lead Prices

Prevailing spot prices at New York, East St. Louis and London for the period from September 3 to September 7, inclusive, are detailed in the following table:—

	Pigs: Per pound New York.	Pigs: Per pound E. St. Louis.	Spot London Per ton £	s.	d.
Monday	*	*	22	6	3
Tuesday	$0.0640	$0.0622½	22	7	6
Wednesday	.0640	.0625	22	6	3
Thursday	.0640	.0625	22	3	9
Friday	.0640	.0625	21	18	9

* Holiday.

Joplin Lead Shipments

Recent shipments of lead from Joplin have been as follows:—

	Short tons: Aug. 27-Sept. 1.	Aug. 20-25.	Total to date 1928.	1927.
Shipments	1,288	1,470	61,488	72,295

Zinc Prices

Prevailing spot prices at New York, East St. Louis and London for the period from September 3 to September 7, inclusive, are detailed in the following table:—

	Slabs: Per pound New York.	Slabs: Per pound E. St. Louis.	Spot London Per ton £	s.	d.
Monday	*	*	24	15	0
Tuesday	$0.0660	$0.0625	24	16	3
Wednesday	.0660	.0625	24	17	6
Thursday	.0660	.0625	24	16	3
Friday	.0660	.0625	24	12	6

* Holiday.

Valuable information on Imports and Exports of Paint and Varnish Materials is given in port lists beginning on page 5.

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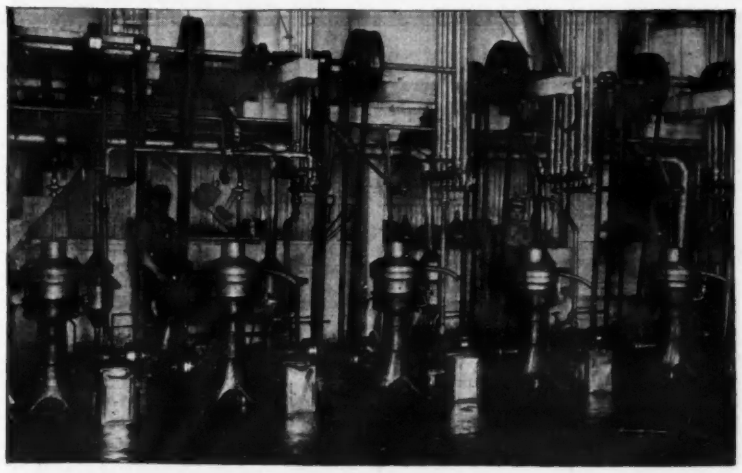

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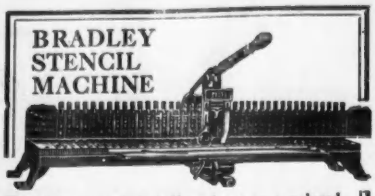

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Joplin Zinc Shipments

Recent shipments of zinc from Joplin have been as follows:—

	Short tons			
	Aug. 27-Sept. 1.	Aug. 20-25.	Total to date 1928.	1927.
Shipments...	10,584	10,261	395,771	447,711

Pigments

Little change was to be seen in the position of the pigments market during the past week. Price changes were lacking, and there was no pronounced pick-up in the volume of trading. Continued strength in pig lead made for a firm market on lead pigments, and was reflected by good buying of dry products in casks.

Manufacturers in general were optimistic regarding the outlook for business over the remainder of the year. With the period of summer slackness behind, and vacation season at an end, it was felt that an early pick-up in volume might reasonably be looked for. Prices on principal materials appear well stabilized.

White Lead.—Dry white lead sales continued to hold up well, and the market was unchanged at 7¾c. a pound for basic sulphate and 8½c. for basic carbonate. White lead in oil was moving in but routine volume, quotations being without change. Corroders expected that the continued heavy building program over the fall season would make for a well-sustained consumption of both white and red lead in oil.

Red Lead.—Dry red lead and casks was moving in good volume, with the market maintained at 9¾c. per pound. Another 10 point advance in the pig lead market will bring dry red lead in casks up to a 10c. basis. The market for red lead in oil was showing a steady tone, with corroders noting a well sustained inquiry for prompt shipment material.

Orange Mineral.—Conditions were without material change in this division of the market. The American product was firm at 11¾c. to 13c. per pound, with a good movement reported. The market for the imported was without change, sales being held down to small quantities.

Litharge.—The commercial powdered grade continued to move out in good volume, corroders holding the market at 8¾c. per pound in casks. The strong market for pig lead, together with the fact that another 10 point increase in the metal basis means a ¼c. advance on litharge, had given buyers confidence in the market position.

Lithopone.—Manufacturers reported some increase in the movement of lithopone on contract, and the market continued in steady position. No change in the market is anticipated, inasmuch as consuming manufacturers in most cases are covered by contract on their requirements for the remainder of the year. Makers are not expected to start booking 1929 contracts for two or three months.

Zinc Oxide.—Sellers noted a better demand from the paint trade, and the market was in steady position. With quotations for the metal showing little alteration, and the undertone rather steady, there have been no developments affecting the price basis of the oxides. The bulk of the movement last week was reported to be movement of oxide against standing contracts, little spot inquiry being in evidence.

Barytes.—Quiet trading was reported on both the domestic and the imported grades last week. Little spot inquiry was noted, and contract movement was along routine lines. Prices were without change.

Dry Colors

Volume was holding up well in the dry color trade during the week, and prices appeared on a steady basis on all colors. Sellers noted a well-sustained movement on contract, and a little more spot inquiry had made its appearance.

Leading sellers reported that their volume thus far in 1928 is substantially ahead of comparative 1927 totals, and were inclined to look for a continuance of heavy buying of colors over the remainder of the current year.

Blacks.—Nothing definite has developed in connection with 1929 contract business on carbon black, and sellers do not expect to see the futures market take on any activity until late next month. There was a better inquiry for standard grades from the paint industry last week, but the bulk of the buying was coming from rubber and ink manufacturers. Quotations were firmly held. Lampblack sales continued of good volume, with prices holding steady. Black oxide of iron met with a good movement, and was in firm position.

Blues.—Although sellers continued to quote 32c. to 34c. per pound on spot iron blues, it was evident that not all manufacturers had moved their prices upward in line with the recent advance made by some makers. Reports of business at 31c. continued, and it was reported that ink manufacturers were in position to cover at as low as 29c. to 30c. per pound on large quantity business.

Browns.—Trading in this division of the market continued of routine proportions last week. Paint manufacturers were reported to be drawing stocks against contract in good volume, but the spot market lacked animation. There was a steady undertone prevailing on both the domestic and the imported grades.

Greens.—Consuming manufacturers were in the market for chrome greens in a fair way last week, and quotations were holding rather steady on all grades. Chrome green oxide demand had eased off a little, but prices were well held. Jobbers' and grinders' grades were coming in for more inquiry during the week, but prices were without change, and the same applied to commercial greens. Limeproof green was steady and unchanged, with a fair amount of buying going on.

Reds.—No further changes developed in this division of the market. Makers continued to adhere to the advanced basis of $6.00 per pound for carmine No. 40, with quiet trading in progress. Vermilion was unchanged at $1.85 to $1.90 per pound, with a moderate amount of buying reported. With the quicksilver market holding very firm, and spot stocks rather light, makers were showing firm views on vermilion for both prompt and later delivery. Toners were coming in for slightly better buying during the week, but prices failed to show any alterations.

Yellows.—With manufacturers lining up their fall sales, some price competition on chrome yellow continued in evidence, and it was possible to shade the listed prices of 15½c. to 16c. per pound in some quarters. The increasing firmness in the position of pig lead, however, was causing some sellers to adhere more closely to their regular prices. More inquiry for ochers had developed, and it was reported that deliveries on contract were being speeded up somewhat as consuming manufacturers entered the market in a larger way.

Colors in Oil

Rainy weather over the greater part of the East last week tended to slow down the demand for oil colors somewhat, but the market continued in steady position. Manufacturers were still busy in getting out shipments on orders previously entered, and were looking for further buying by the retail trade for stocks for fall requirements. With prices on the more important paint materials holding in steady position, the market for oil colors was reflecting this condition.

Varnish Gums

Varnish and lacquer manufacturers were in the market for gums in slightly better volume last week, and more activity was noted on several grades. The cheaper selections of Manila gums were in good demand, and the same was true of East Indian gum. Makers were talking higher prices on esters, but no changes developed. Demand for the latter gum, however, had shown considerable improvement.

Copals.—Congo sorts had weakened a little, offerings being made on spot at 4¾c. to 5¼c. per pound, the inside figure representing a ¼c. decline for the week. Manila pale chips were in better demand, and the market firmed up ¼c. to 10½c. to 10¾c. per pound. East Indian pale bold was in good demand, and importers quoted the market ½c. higher at 18c. to 18½c. per pound. Other grades remained quiet and unchanged.

Dammars.—Batavia dammar came in for better buying during the week and was held firm at 22¼c. to 22¾c. per pount on spot. Seeds were strong at 16c. to 16½c. per pound, sellers noting an improved inquiry. Singapore grades were not in excessive supply on spot, and the market was well held on all grades. Elemis moved in but moderate quantities, but quotations held about steady. June imports of dammar gum totaled 727,887 pounds.

Kauris.—The marked has eased off a little, reflecting the weaker position which has developed at primary points during recent months. Offerings of white chips, ordinary, were reported at 19c. to 23c. per pound, the lower figure being 3c. under previous quotations. Ordinary white dust was available at 11½c. to 14c. per pound, the inside quotation being 1½c. under the previous price. Extra chips were quoted at 22c. to 24c. per pound, 2c. under previous quotations, with ordinary brown chips ranging 10½c. to 12c. a pound, 1c. under the former price. Demand was holding up fairly well, with most of the buying still confined to the cheaper selections. June imports of kauri gums were 372,101 pounds, the Department of Commerce reports.

Esters. — Consuming manufacturers were reported to be coming in for supplies in slightly better volume, and the market tone had stiffened somewhat. No price advances materialized, however, and gum was still offering at 8½c. to 8¾c. per pound for the dark and 9c. to 9½c. per pound for the light grade.

Other Paint Materials

Sales had picked up somewhat last week, and sellers were looking for an active fall season. Paint manufacturers were ordering forward ship-

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ments on contract in good volume, and some increases in the volume of spot sales was also reported. Prices were well maintained.

Casein.—Domestic 20-30 was quoted ¼c. higher at 16¼c. to 16½c. per pound on spot, with other grades holding unchanged. There was a good demand from makers of plastic wall finishes, with other branches of the paint trade operating in but routine fashion.

China Clay.—A steady market for clay was reported during the week, with sellers noting some increase in the volume of contract business. Prices remained in steady position on both the domestic and the imported grades.

V. M. and P. Naphtha.—Sellers noted a good demand for varnish makers' and painters' naphtha for prompt shipment, the market holding firm at 20c. per gallon, in barrels.

CHICAGO, Sept. 7.—Demand for V. M. & P. naphtha was brisk and the product moved out into the trade well. Prices were holding fully firm. Some sellers were still reporting such a good business that they were keeping up with orders only with difficulty. Ruling prices were (cents per gallon):—Tankcar (f.o.b. Whiting), 13.3c.; tankwagon, 16.2c.

Whiting.—Gilders' bolted was selling in good volume last week at $1.25 to $1.35 per 100 pounds, with the extra grade ranging from $1.40 to $1.50. Imported grades were moving out in fair quantities, at steady prices, and the demand for the domestic varities also held up well, no prices changes being recorded.

Driers

There was continued active demand for resinates last week, and the market was in strong position. Aluminum resinate, precipitated, remained firm at 16½c. to 17c. per pound. Copper resinate held at 18c. to 19c. per pound, with manganese resinate holding at 13½c. to 14½c. a pound for the precipitated grade. Stearates were also meeting with a good call. Sellers reported that manufacturers of flat varnishes continued active buyers, with considerable business booked for delivery over the closing quarter of the year.

Metal Leaf

Inquiry had shown some improvement in the gold leaf branch of the market last week, and a steady undertone prevailed. Demand was principally for the 3¾ square inch size, with the imported holding at $10.25 to $10.50 per package of 20 books, with domestic grade at $10.50 to $12.00 per package. Silver leaf sales were holding up well with sellers quoting $2.25 to $2.75 per package for the 3¾ square inch size. Composition metal leaf and aluminum leaf were steady and in routine demand.

Lacquer Materials

Although the producers of butyl alcohol reduced their discounts, their September quotations remained substantially unchanged from the prices that had ruled ever since last May. That is the price for tank cars was repeated at 17¾c. to 18¾c. per pound, while the car lot quotation in drums remained at 18¼c. to 19¼c. per pound. Most lacquer materials manufacturers were in receipt of a comfortable volume of business last week and they declared that prices generally were without quotable change. A satisfactory volume of buying orders continued to reach the market from the manufacturers of artificial leather. Producers of ethyleneglycol monobutyl ether, ethylemonoethyl ether, and monoethyl ether acetate were in receipt of a satisfactory volume of business from the users of these chemicals. The ruling high prices for methanol had a strengthening influence on the position of the market, it was reported. None of the foreign products showed any price change.

Exports of amyl ethyl and butyl acetates in the first six months of this year totaled 274,357 pounds, whereas in the same time a year ago none were exported. The exports of nitro, or cellulose solutions collodion, etc., during the same time were 752,530 pounds. Automotive exports during July were valued at $46,526,449, which was an increase of 15 percent over July, 1927. Automobile output generally was expected to be well maintained this month.

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98-99% SiO_2
AMERICAN TRIPOLI COMPANY
SENECA, MISSOURI, U. S. A.
Incorporated 1892

"Once Ground" 80%—200 mesh	Apparent Density .685 to .806
"Double Ground" 97%—200 mesh	Wt. per cu. ft. 42 lbs. to 50 lbs.
"Air Float" 99%—325 mesh	Absorption 52%
In Rose, Cream or Light Cream	Special grades for special uses

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Ultramarine Blues
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Glues

There was a slight improvement in the demand for the general line of glues last week, and sellers were anticipating continued expansion in buying. Manufacturers plan to resume operations on a large scale by the close of the month. Although raw material costs have eased off a little, fish liquid glue remained in firm position last week. Common bone was steady, and hide grades were also well maintained.

Window Glass

The window glass market enters the new month in good position. Orders received by the manufacturers during August were reported well above the average for that month, and inquiries already received for September shipment stocks indicate a heavy volume this month. Production is expected to show gradual expansion as the fall movement develops. Prices and discounts were without change last week.

There was a steady market for plate glass during the past week. Automobile manufacturers continued in the market in a large way, and there was a heavy inquiry reaching manufacturers from mirror manufacturers. There were no price changes reported.

Current Prices

(For late price changes, see page 2)

Pigments

Antimony, white, barrels	lb.	.16½@	.17
Asbestine (see Talc, fibrous, in Other Paint Materials).			
Barytes, domestic, floated, car lots, barrels	ton.	30.50 @	—
less car lots, barrels	ton.	34.50	@35.00
f.o.b. St Louis, car lots, barrels	ton.	23.00 @	—
Southern, off color, works, bulk	ton.	12.00	@20.00
imported, barrels	ton.	27.00	@34.00
Blanc fixe, dry, car lots, works, barrels	lb.	.03½@	—
less car lots, works, barrels,	lb.	.03⅝@	—
pulp, works, bulk	ton.	42.50	@45.00
Flake, white, barrels	lb.	.12¼@	—
Litharge, assayers', casks	lb.	.08⅜@	—
steel kegs	lb.	.13¼@	—
*commercial, powdered, casks, 100 lbs.		8.75 @	—
*steel kegs, less than 500 lbs.	lb.	.13¼@	—
500 to 2,000 lbs.	lb.	.1192@	—
2,000 to 10,000 lbs.	lb.	.1144@	—
10,000 to 30,000 lbs.	lb.	.1103@	—
car lots, minimum 15 tons,	lb.	.1073@	—
Lithopone, domestic, car lots or more, bags	lb.	.05¼@	—
barrels	lb.	.05½@	—
less car lots, bags	lb.	.05½@	—
barrels	lb.	.05⅝@	—
imported, ex-dock, barrels	lb.	.05¼@	.05½
ex-warehouse, barrels	lb.	.05⅝@	.06
Metallic red or brown, Pennsylvania works, bags, barrels.	ton.	37.00	@45.00
Orange mineral, American, casks	lb.	.11¾@	.13
French, Tours, casks	lb.	.16½@	—
kegs	lb.	.17½@	—
*Red lead, dry, casks	100 lbs.	9.75 @	—
less than 500 lbs., 100-lb. kegs.	lb.	.13¼@	—
500 to 2,000 lbs., kegs	lb.	.1192@	—
2,000 to 10,000 lbs., kegs	lb.	.1144@	—
10,000 to 30,000 lbs., kegs	lb.	.1103@	—
car lots, min. 15 tons, kegs	lb.	.1073@	—
*Red lead in oil, less than 500 lbs., steel kegs	lb.	.14¾@	—
500 to 2,000 lbs., kegs	lb.	.1327@	—
2,000 to 10,000 lbs., kegs	lb.	.1274@	—
10,000 to 30,000 lbs., kegs	lb.	.1227@	—
car lots, min. 15 tons, kegs	lb.	.1194@	—
Titanium pigment, works, car-lots, bags, barrels	lb.	.10 @	—
less car lots, barrels	lb.	.10½@	—
dioxide, barrels	lb.	.35 @	—
White lead, basic carbonate, American, dry, casks	lb.	.06½@	—
basic sulphate, casks	lb.	.07¾@	—
*White lead in oil, less than 500 lbs., 100-lb. kegs	lb.	.13¼@	—
500 to 2,000 lbs., kegs	lb.	.1192@	—
2,000 to 10,000 lbs., kegs	lb.	.1144@	—
10,000 to 30,000 lbs., kegs	lb.	.1103@	—
car lots, minimum 15 tons, kegs	lb.	.1073@	—
Zinc oxide, American process, commercial, lead free, car lots, bags	lb.	.06½@	—
barrels	lb.	.06¾@	—
less car lots, barrels	lb.	.07 @	—
5 p.c., leaded grades, car lots, bags	lb.	.06⅝@	—
barrels	lb.	.06⅞@	—
less car lots, barrels	lb.	.07 @	—
bags	lb.	.06¾@	—
10, 20 or 35 p.c. leaded grades, car lots, bags	lb.	.06⅝@	—
barrels	lb.	.06⅞@	—
less car lots, bags	lb.	.06¾@	—
barrels	lb.	.07 @	—
Zinc oxide, French process, green seal, car lots, bags	lb.	.10⅝@	—
barrels	lb.	.10⅞@	—
less car lots, barrels	lb.	.10¾@	—
red seal, car lots, bags	lb.	.09¾@	—
barrels	lb.	.09⅞@	—
less car lots, barrels	lb.	.09¾@	—
white seal, car lots, barrels,	lb.	.11⅝@	—
less car lots, barrels	lb.	.11⅞@	—
imported, green seal, ex dock, barrels	lb.	.10⅝@	.12
ex warehouse, barrels	lb.	.10⅞@	.12¼
Zinc oxide, imported, red seal, ex dock, barrels	lb.	.09⅝@	—
ex warehouse, barrels	lb.	.09⅞@	—
white seal, ex dock, barrels,	lb.	.12¼@	.13
ex warehouse, barrels	lb.	.12½@	.13¼

* All prices subject to cash discount of 2 percent and are single delivery.

Dry Colors

Blacks

Bone, powdered, barrels	lb.	.05½@	.15
Carbon gas, litho ink qualities, bags	lb.	.22 @	.30
standard rubber, ink and paint qualities, bags, casks	lb.	.12½@	.13
works, bags	lb.	.07½@	—
varnish grade, highest, bags,	lb.	.35 @	.50
medium, bags	lb.	.16 @	.26
Charcoal, common, barrels	lb.	.05 @	—
willow, powdered, barrels	lb.	.06 @	.07
Drop, barrels	lb.	.05½@	.15
Iron oxide, commercial, barrels,	lb.	.04½@	.07
C.P., barrels	lb.	.10 @	.15
Ivory, genuine, barrels	lb.	.30 @	.35
Lampblack, commercial, barrels,	lb.	.09 @	—
grinders' blue-tone, barrels	lb.	.18 @	.20
litho, barrels	lb.	.25 @	—
special high-grade, barrels	lb.	.50 @	—
velvet, barrels	lb.	.12 @	—
Mineral blacks, works, bags	ton.	28.00	@32.00

Blues

Bronze, barrels	lb.	.32 @	.35
Celestial, barrels	lb.	.10 @	.15
Chinese, barrels	lb.	.32 @	.35
Milori, barrels	lb.	.32 @	.35
Prussian, barrels	lb.	.32 @	.35
Soluble, barrels	lb.	.32 @	.35
Ultramarine, barrels	lb.	.06 @	.30

Browns

Sienna, American, burnt, powdered, ton lots, barrels	lb.	.03 @	.04
raw, powdered, ton lots, barrels	lb.	.02¾@	.03⅛
Italian, burnt, powdered, ton lots, barrels	lb.	.05¼@	.12½
raw, powdered, ton lots, barrels	lb.	.05½@	.12½
Spanish, high grades, bulk	lb.	.03 @	—
low grades, bulk	lb.	.02½@	—
Umber, American, burnt, powdered, car lots, barrels	lb.	.02½@	.03½
raw, powdered, car lots, barrels	lb.	.02¾@	.03½
Turkey, burnt, powdered, ton lots, barrels	lb.	.04 @	.06
raw, powdered, ton lots, barrels	lb.	.04 @	.06
Vandyke, domestic, ton lots, barrels	lb.	.03 @	.03½
imported, barrels	lb.	.04¼@	.05

Greens

Chrome, C.P., dark, barrels	lb.	.30 @	.33
light, barrels	lb.	.27 @	.31
medium, barrels	lb.	.28 @	.31
oxide, domestic, kegs	lb.	.30 @	.32
barrels	lb.	.27 @	.28½
imported, kegs	lb.	.34 @	.44
Commercial, barrels	lb.	.06¼@	.10
Grinders', barrels	lb.	.08 @	.19
Jobbers', barrels	lb.	.06¼@	.07
Limeproof, kegs	lb.	.09¼@	.15
Paris (see Industrial Chemicals).			
Verdigris, casks	lb.	.22 @	.23

Reds

Amaranth (maroon lakes), kegs.	lb.	.50 @	1.50
Alizarin, lake, concentrated, kegs,	lb.	1.50 @	2.10
Carmine, No. 40, 11-lb. tins	lb.	6.00 @	—
Crocus martis, purple oxide, barrels	lb.	.03 @	.05
Eosin, kegs	lb.	.65 @	.75
Indian, American, ordinary, barrels	lb.	.03 @	.08
pure, barrels	lb.	.10 @	.14
English, ordinary, barrels	lb.	.06 @	.09
pure, barrels	lb.	.11 @	.14
Lithol toner, kegs	lb.	.85 @	1.10
Mercury oxide, technical, imported, cases, barrels	lb.	2.00 @	2.05
domestic	lb.	2.11 @	—
Oxide, copperas, casks	lb.	.04 @	.14
earth, domestic, barrels	lb.	.02 @	.04½
Spanish, barrels	lb.	.03 @	.04½
Para toner, concentrated, 100-lb. lots, kegs	lb.	.69 @	.80
reduced, 10 percent, kegs	lb.	.10 @	.13
Purple lake, kegs	lb.	.60 @	2.00
Rose pink, barrels	lb.	.15 @	.25
lake, barrels	lb.	.20 @	.30
Scarlet lake, kegs	lb.	.35 @	.90
Toluidin toner, kegs	lb.	1.60 @	1.75
Tuscan, barrels	lb.	.15 @	.40
Venetian, barrels	lb.	.01½@	.05
Vermilion, American, barrels	lb.	.15 @	.25
English quicksilver, kegs or barrels	lb.	1.85 @	1.90

Yellows

Chrome, C.P., ton lots, light, medium, dark, barrels	lb.	.15½@	.16¼
Dutch pink, barrels	lb.	.08 @	.10
Iron oxide, natural, barrels	lb.	.04 @	.05
precipitated, barrels	lb.	.08 @	.12
Mercury oxide, technical, imported, cases, barrels	lb.	2.00 @	2.05
domestic	lb.	2.11 @	—
Ocher, domestic, golden, barrels	lb.	.06 @	.07½
yellow, barrels	lb.	.01⅝@	.02⅝
French, dark, casks	lb.	.02¾@	.02⅞
dark, medium, casks	lb.	.03 @	.03¼
extra light, casks	lb.	.03½@	.03⅝
light, casks	lb.	.03¾@	.03⅞
light medium, casks	lb.	.03⅝@	.03¾
medium, casks	lb.	.03 @	.03¼
Zinc yellow, barrels	lb.	.23 @	.26

Colors in Oil

(In 1-lb. cans; ½c. per lb. less in 5-lb. cans. Basis 100-lb. cases)

Blacks

Coach	lb.	.32 @	.34
in japan	lb.	.48 @	.50
Drop	lb.	.32 @	.34
Lampblack	lb.	.44 @	.45

Blues

Chinese	lb.	.60 @	.65
Imitation cobalt	lb.	.52 @	.54
Prussian	lb.	.60 @	.65
Ultramarine	lb.	.46 @	.48

Browns

Sienna, Italian, best grades	lb.	.30 @	.32
Umber, Turkey, best grades	lb.	.26 @	.27
Vandyke, genuine	lb.	.27 @	.29

Greens

Chrome, C.P., in japan	lb.	.48 @	.50
commercial, 25 percent	lb.	.27 @	.29

Reds

Indian	lb.	.31 @	.32
Tuscan	lb.	.41 @	.43
Venetian	lb.	.17 @	.20

Yellows

Carome, C.P.	lb.	.40 @	.42
Ocher, French	lb.	.21 @	—

Lacquer Materials

Bases

Cellulose acetate, bags	lb.	1.20 @	1.25
Nitrocellulose, ½ sec., dehydrated, works, barrels	lb.	.36 @	—
15-20 sec., dehydrated, works, barrels	lb.	.33 @	—
regular, works, drums	lb.	.40 @	—

Solvents and Diluents

Alcohol, C.D. 1, anhydrous, frt. alld. E. of Miss., car lots, drums	gal.	.68 @	—
less car lots, drums	gal.	.71 @	—
tanks	gal.	.66 @	—
Amyl alcohol, refined from fusel oil, drums	gal.	1.90 @	2.10
from pentane, small lots, works	gal.	2.25 @	—
car lots, works, drums	gal.	1.67 @	—
less car lots, drums	gal.	1.75 @	—
tanks, works	gal.	1.65 @	—
Butyl acetate, domestic, car lots, tanks	gal.	1.40 @	—
car lots, drums	gal.	1.42 @	—
less car lots, drums	gal.	1.45 @	—
imported, drums	gal.	1.38 @	—
tanks	gal.	1.36 @	—
alcohol, works, tanks	lb.	.1775@.1875	
car lots, drums	lb.	.1825@.1925	
less than car lots, drums,	lb.	.1875@.1975	
less than 100 gals., drums	gal.	.2075@.2125	
cans	lb.	.2225@	—
tate, tanks	lb.	.25 @	—
ims	lb.	.27 @	—
Diacetone alcohol, car lots, drums,	gal.	1.42 @	1.47
500 gallons or more	gal.	1.55 @	—
100 gallons or more	gal.	1.60 @	—
Diethyl carbonate, 90 p.c., drums,	gal.	1.85 @	1.90
Ethyl acetate (see Industrial Chemicals, page 8).			
anhydrous, car lots, drums,	gal.	1.09 @	1.14
less car lots, drums	gal.	1.12 @	1.17
tanks	gal.	1.07 @	1.12
lactate, drums	lb.	.30 @	.37
oxybutyrate, drums	lb.	.30 @	.35
Ethyleneglycol monobutyl ether, works	lb.	.26 @	.31
monoethyl ether, works, car lots, drums	lb.	.20 @	—
less car lots, drums	lb.	.21 @	.24
tanks	lb.	.19 @	—
monoethyl ether acetate, works, car lots, drums	lb.	.23 @	—
less car lots, drums	lb.	.23½@	.26
tanks	lb.	.22 @	—
Isoamyl alcohol (primary), works, drums	gal.	3.50 @	—
works, cans	gal.	4.00 @	4.50
Methyl acetate, domestic, drums,	gal.	.85 @	.95
imported, drums	gal.	.85 @	.95

Plasticizers and Softeners

Acetanilide, 95 p.c., barrels	lb.	.21 @	—
Acetin, technical, drums	lb.	.32 @	.34
Butyl tartrate, drums	lb.	.55 @	.60
Camphor (see Gums and Waxes).			
Castor oil, blown, car lots, drums	lb.	.14½@	—
less car lots, drums	lb.	.14¾@	—
Diamyl phthalate, drums	lb.	.33 @	—
Dibutyl phthalate, drums	lb.	.27½@	.29
Diethyl phthalate, drums	lb.	.25 @	.29
Ethylmetatoluenesulphonamide, barrels	lb.	.65 @	—
Ethylparatoluenesulphonamide, barrels	lb.	.70 @	—
Paratoluenesulphonanilide, barrels	lb.	.55 @	—
Triacetin, drums	lb.	.37 @	.38
Tricresyl phosphate, drums	lb.	.35 @	.45
Triphenyl phosphate, drums	lb.	.60 @	.65

Varnish Gums

Asphaltum, Barbados (Manjak), A, barrels	lb.	.06½@	.07
AA, barrels	lb.	.13¾@	—
California, barrels	ton.	41.60	@49.00
Cuban, cases	ton.	60.00	@150.00
Egyptian, bags	lb.	.15 @	.16
Gilsonite, select, bags, car lots, works	ton.	33.00 @	—
ex warehouse, bags	ton.	55.00	@60.00
Maltha, barrels	ton.	53.00	@67.50
Mexican, barrels or drums	ton.	21.00	@25.00
Texas, barrels or drums	ton.	15.00	@25.00
Trinidad, com'l., barrels	ton.	23.00	@35.00
varnish grade, barrels	ton.	115.00	@120.00
Copal, Congo, dark amber, bags,	lb.	.07½@	.07¾
sorts, bags	lb.	.04¾@	.05¼
water white, bags	lb.	.37 @	.45
E. Indian, pale bold, cases	lb.	.18 @	.18½
nubs, bags	lb.	.14 @	.14¼
chips, bags	lb.	.06 @	.06½
black, bold, scraped, bags	lb.	.07 @	.07½
unscraped, bags	lb.	.05¾@	.06
nubs and chips, bags	lb.	.05¼@	.05½
Manila, bright amber, cases,	lb.	.15 @	.15¼
dark, hard, cases	lb.	.16 @	.17
pale, chips, bags	lb.	.10½@	.10¾
nubs, bags	lb.	.14½@	.15
standard, sorts, bags	lb.	.09½@	.10
Pontianak, genuine, selected bold, bags	lb.	.17 @	.17¼
chips, small, bags	lb.	.13 @	.13¼
split, bags	lb.	.16 @	.16½
nubs, No. 1, bags	lb.	.14 @	.14¼
mixed, cases	lb.	.12½@	.13
Dammar, Batavia, cases	lb.	.22¼@	.22¾
seeds, cases	lb.	.16 @	.16½
Singapore, No. 1, cases	lb.	.29½@	.30
No. 2, cases	lb.	.23 @	.23½
No. 3, bags	lb.	.12 @	.12½
Elemi, No. 1, cans	lb.	.12½@	.13
No. 2, cans	lb.	.11½@	.12
No. 3, cans	lb.	.10½@	.11
Kauri, bright, dust, cases	lb.	.16 @	.17
brown, BX, cases	lb.	.48 @	.50
B 1, cases	lb.	.32 @	.35
B 2, cases	lb.	.21 @	.24
B 3, cases	lb.	.15½@	.17
chips, extra, cases	lb.	.22 @	.24
ordinary, cases	lb.	.10½@	.12
dust, cases	lb.	.06 @	.10
pale, fine, cases	lb.	.75 @	1.50
No. 1, cases	lb.	.48 @	.55
No. 2, cases	lb.	.30 @	.35
No. 3, cases	lb.	.14 @	.17
dust, cases	lb.	.07 @	.08
white, chips, ord., cases	lb.	.19 @	.23
dust, ordinary, cases	lb.	.11½@	.14

Artificial Resins

Paracoumarone resin, car lots, drums	lb.	.07 @	.12
Ester gum, dark, barrels	lb.	.08½@	.08¾
light, barrels	lb.	.09 @	.09½

Other Paint Materials

Bauxite, mines, bulk	ton.	5.00 @	8.00
Bronze powder, aluminum, bulk,	lb.	.63 @	1.20
gold, bulk	lb.	.55 @	1.25
Casein, domestic, 20-30 mesh, car lots, bags	lb.	.16¼@	.16½
80-100 mesh, car lots, bags	lb.	.16¾@	.17
imported, fine ground, car lots, bags	lb.	.16¾@	.17
Chalk, grinders', powdered, barrels	ton.	12.00 @	—

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The Raymond No. 0000 Pulverizer has been designed for accomplishing this complex grinding operation according to exact specifications and at remarkably low production cost.

Motor-driven No. 0000 Pulverizer, constituting a complete, self-contained unit on an integral base. Equipped with air separation, including cyclone collector and tubular collector—a recent Raymond model

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Chine clay, domestic, lump, mines, bulk	ton.	8.00 @	9.00
powdered, bags	ton.	10.00 @	15.00
imported, lump, bulk	ton.	15.00 @	25.00
powdered, barrels	lb.	.03 @	.03½
Cobalt oxide, black, kegs	lb.	2.10 @	2.20
Copper oxide (see Industrial Chemicals).			
Feldspar, powdered, works, bulk,	ton.	15.00 @	21.00
Fuller's earth, domestic, mines, bulk	ton.	15.00 @	20.00
imported, powdered, car lots, bags	ton.	25.00 @	30.00
Graphite, flake, barrels	lb.	.06 @	.09
ground, barrels	lb.	.04 @	.07
Infusorial earth, white, bags	ton.	25.00 @	—
Lime sulphide, luminous, tins	lb.	1.00 @	1.25
Magnesia silicate (see talc).			
Manganese ore, powd. or gran., 75@80 p. c., barrels	lb.	.03 @	.03½
80@85 p.c., barrels	lb.	.04 @	.04½
85@88 p.c., barrels	lb.	.05 @	.05½
Marble flour, bags	ton.	14.00 @	15.00
Mica, dry ground, works, bags,	ton.	65.00 @	80.00
wet ground, works, bags	ton.	110.00 @	115.00
Naphtha, v.m.& p., deodorized, barrels	gal.	.20 @	—
Pitch, hardwood, works, one-time container	ton.	40.00 @	45.00
Plaster of paris, bags	ton.	28.00 @	29.00
barrels	100 lbs.	3.40 @	3.50
dentists', barrels	100 lbs.	3.75 @	—
Pumice stone, lump, casks	lb.	.05 @	.07
powdered, pure, barrels	lb.	.02½@	.04
Putty, commercial, tubs	lb.	.03¼@	—
linseed oil, kegs	lb.	.05½@	—
Rottenstone, domestic, mines, bulk	ton.	23.50 @	28.00
imported, barrels	lb.	.05 @	.07
powdered, barrels	lb.	.02½@	.04½
selected, lump, barrels	lb.	.10 @	.12
Silica, fine ground, works, bulk,	ton.	8.00 @	11.00
water floated, works, bulk	ton.	22.00 @	30.00
extra (400 mesh), f.o.b. works, bulk	ton.	32.00 @	40.00
Smalt, blue, barrels	lb.	.06 @	.07
extra velvet black, barrels	lb.	.05 @	.06
Soapstone, powdered, f.o.b. mines, bags	ton.	15.00 @	22.00
Talc, American, Eastern, f.o.b. mines, bulk	ton.	16.00 @	18.00
French, bags	ton.	18.00 @	22.00
high-grade, bags	ton.	40.00 @	45.00
Italian, bags	ton.	50.00 @	55.00
Talc, fibrous, car lots, works, bags	ton.	15.00 @	—
spot, car lots, bags	ton.	20.00 @	—
less car lots	ton.	25.00 @	—
Westerr, mines, bulk	ton.	18.00 @	25.00
Terra alba, Am., No. 1, mills, bags or barrels	100 lbs.	1.15 @	1.75
No. 2, bags or barrels	100 lbs.	1.50 @	2.00
imported, bags	lb.	.02 @	.02¼
Tripoli, car lots, bags	lb.	.01¾@	.02
Whiting, domestic, bags or barrels	100 lbs.	1.00 @	—
English cliffstone, bags	100 lbs.	1.50 @	—
paris white, bags	100 lbs.	1.25 @	1.50
imported, commercial, bags	100 lbs.	.85 @	1.00
ton lots, bags	ton.	14.00 @	—
ex dock, car lots, bags	ton.	12.00 @	16.00
gilders', bolted, bags	100 lbs.	1.25 @	1.35
extra bolted, bags	100 lbs.	1.40 @	1.50

Driers

(Packed in Barrels)

Aluminum, oleate, precip	lb.	.21 @	.21¼
palmitate, precipitated	lb.	.28 @	.28½
resinate, precipitated	lb.	.16½@	.17
stearate, precipitated	lb.	.22½@	.23
Calcium, resinate, precipitated,	lb.	.16 @	.16¾
stearate, precipitated	lb.	.22½@	.23
Cobalt, acetate	lb.	.85 @	.90
carbonate	lb.	1.75 @	1.85
hydrate	lb.	2.25 @	2.30
linoleate, paste	lb.	.42 @	.45½
solid	lb.	.49 @	.50
resinate, fused, A	lb.	.12½@	—
1 p. c.	lb.	.11⅝@	—
2 p. c.	lb.	.16 @	.16¼
3 p. c.	lb.	.17 @	.17⅛
precipitated	lb.	.42 @	.42½
Copper oleate, precipitated	lb.	.28 @	.28½
resinate, precipitated	lb.	.18 @	.19
stearate, precipitated	lb.	.29 @	.29½
Lead linoleate, solid	lb.	.26 @	.26½
resinate, precipitated	lb.	.18 @	.18½
fused	lb.	.09 @	.10
Manganese borate, high grade,	lb.	.19 @	—
technical	lb.	.15 @	.16
linoleate	lb.	.21 @	.21½
oxide, 85 percent	lb.	.04 @	.04½
resinate, fused	lb.	.08½@	.08¾
precipitated	lb.	.13½@	.14½
sulphate, anhydrous	lb.	.08¼@	.08½
Zinc resinate, precipitated	lb.	.14¼@	.14½
fused, dark, hard	lb.	.08¾@	.08½
stearate, precipitated	lb.	.21 @	.22

Glues

Common, bone, barrels	lb.	.17 @	.18
Fish, liquid, barrels	gal.	1.90 @	2.35
French, barrels	lb.	.21 @	.26
Hide, cabinet, high grade, barrels	lb.	.24 @	.28
low grade	lb.	.21 @	.25
White, extra, barrels	lb.	.22 @	.29
medium, barrels	lb.	.21 @	.27

Metal Leaf

(In packages of 20 books—500 leaves)

Aluminum, 5½x5½ in.	per pkg.	1.50 @	—
Composition, 5½x5½ in.	per pkg.	1.50 @	—
Gold, XX deep, 3⅜x3⅜ in.	per pkg.	10.50 @	12.00
imported	per pkg.	10.25 @	10.50
3⅜x3⅜ in.	per pkg.	11.50 @	13.00
4 x4 in.	per pkg.	14.50 @	14.70
3⅜x5 7/16 in.	per pkg.	17.50 @	18.50
3 7/16x5⅞ in.	per pkg.	18.25 @	19.20
Silver, 3⅜x3⅜ in.	per pkg.	2.25 @	2.75

(Note:—All of the above quotations apply to domestic leaf, unless otherwise specified.)

Window Glass

United inches		Bracket sizes		Single AA	Single A	Single B
25	6x8 11x14	to	10x15	$24.00	$20.00	$19.00
34	12x13	to	14x20	25.00	21.00	20.00
40	10x26 18x22	to	16x24	27.00	22.50	21.00
50	20x20	to	20x30	28.00	23.70	22.00
54	15x26	to	24x30	29.00	24.50	22.50
60	20x28 26x34	to	24x36	30.00	26.00	23.25
70	28x32 30x30 32x33	to	30x40	32.00	28.75	25.25
80	34x36	to	30x50	36.50	32.25	28.75

United inches		Bracket sizes		Double AA	Double A	Double B
25	6x8 11x14	to	10x15	$32.00	$28.00	$26.50
34	12x13	to	14x20	25.00	31.00	29.00
40	10x26 18x22	to	10x24	30.00	34.00	31.00
50	20x30	to	20x30	42.00	37.00	34.50
54	15x36	to	24x36	43.00	38.00	35.00
60	26x28	to	24x36	44.00	39.00	35.50
70	26x34 28x32 30x30 32x33	to	30x40	47.00	42.00	38.00
80	34x36	to	30x50	51.00	46.00	41.50
84	30x32	to	30x50	52.00	47.00	42.50
90	3 x36	to	34x56	55.00	50.00	46.00
94	34x38	to	34x60	56.00	51.00	47.00
100	36x50	to	40x60	66.00	60.00	56.00

The schedule of discounts applying to the above quotations follow:—

For Zones B, C, D, E and F:—Single strength, "B" quality, 25-inch bracket sizes, 88 percent; all brackets above this size, 80 percent; double strength, "B" quality, all brackets, 88 percent.

For "A" quality, single strength and double-strength glass, in all of the above-named zones, the discounts will be two points higher than those named for "B" quality.

All prices on "Off quality" glass, which includes Fourth and "C" qualities, have been withdrawn by the manufacturers and will be quoted only upon application.

Prices for flat window glass in Zones D and E are not guaranteed against declines up to date of shipment, as they formerly were.

In Zones B, C and F prices for flat window glass for each of these zones are guaranteed against decline up to date of shipment.

The territory embraced in each zone is defined by manufacturers as follows:—

Zone A—Comprises the States of California, Oregon and Washington.

Zone B—Comprises the States of New Mexico Arizona, Colorado, Utah, Nevada, Wyoming, Idaho and Montana.

Zone C—Comprises the States of Texas, Oklahoma, Kansas, Arkansas and Louisiana.

Zone D—Comprises the New England States.

Zone E—Comprises all territory within 100 miles of the Atlantic or Gulf Seaboard outside of New England, Louisiana and Texas.

Zone F—Comprises the remainder of the United States not included in Zones A, B, C, D and E.

Hereafter the following boxing charges will apply in all zones except Zone A, on all orders for single-strength and double-strength class:—First three bracket sizes, 10c. to 50-inch box; above sizes, up to and including 100 united inches, 20c. per 50-inch box; sizes over 100 united inches, 40c. per 100-inch case; for glass packed 100 inches to the case the charges will be double the amount charged for the same size packed 50 inches to the box.

The following fractional cutting charges will apply:—Single strength, 1 fraction, 25c. per 50-inch box; 2 fractions, 50c. per 50-inch box; double strength, 1 fraction, 35c. per 50-inch box; 2 fractions, 70c. per 50-inch box.

Zinc Pigments Booklet

The New Jersey Zinc Sales Company, this city, has issued a revised edition of its booklet "Zinc Pigments." The various products and brands of the company are described and physical and chemical characteristics of the pigments are given, together with a summary of their uses. A table giving the bulking values of dry pigments is included.

Oil Freights in New York

ALBANY, Sept. 4, 1928.

The Public Service Commission has approved reduced carload rates on petroleum and petroleum products as follows.

New York Central (east) from Lacona to Glens Falls (on Delaware & Hudson) 24 cents, reduction of 6 cents per hundredweight; effective September 23.

New York Central (east) from Rensselaer to Delaware Lackawanna & Western Railroad stations, Binghamton, Cortland, Greene, Homer, Ithaca, Jamesville, Norwich, Owego, Tully, and Whitney Point 22.5 cents per hundredweight; effective October 1.

New York Central (east) from Rennsselaer to stations on Fonda, Johnstown & Gloversville Railroad, Johnstown, 21 cents; Broadalbin and Mayville, 24.5 cents; Cranberry Lake, 26 cents; Sacandaga and Northville, 30.5 cents per hundredweight; effective October 1.

Pennsylvania Railroad, from Rensselaer to Pennsylvania Railroad stations, Elmira, 23.5 cents; Arcade, Belfast, Cuba, East Aurora, Franklinville, and Nunda, 24 cents per hundredweight; effective September 25.

William R. McFarland, president of the McMurtry Manufacturing Company, Denver, has been elected president of the Lakewood Country Club, Denver.

Paints and varnishes to the value of $4,34.97 were sold in a house-to-house canvass during the recent Clean Up and Paint Up campaign in Leetsdale, Pa.

The Sachtleben A. G., one of the largest German manufacturers of lithopone, has closed its plant at Schoeningen, slow sales having resulted in a heavy surplus of stocks.

David Craven, of the Chicago office of the National Oil Products Company, left for Chicago September 7 after spending a week at the company's headquarters in Harrison, N. J.

Germany exported 4,081 metric tons of lacquers, japans and varnishes, not containing alcohol, during the first six months of this year, an increase of 38 percent, in comparison with the corresponding period of 1927.

Peaslee-Gaulbert Company, of Dallas, has filed a complaint with the Interstate Commerce Commission seeking lower freight rates on carload shipments of linseed oil from Buffalo, N. Y., Superior, Wis., and Des Moines, Iowa, to Dallas and other Texas points.

Th Libbey-Owens Sheet Glass Company will open its new Toledo plant, capable of producing 8,000,000 square feet of glass a year, October 1. The company will add 750 men to its force to man the new units. The new laminated glass plant, with an annual capacity of 10,000,000 square feet of nonshatterable glass, will open December 1.

Naval Stores

Rosin Advances in Primary and Local Markets —Turpentine Steadier—Increased Receipts —Trade More Active

The local market for naval stores was more active last week, a considerable increase in demand for turpentine and rosin being reported in some quarters. Changes in the former product were narrow, while the latter was irregular, being easy early in the week and firmer later on.

Southern markets for turpentine were fairly active and although a decline of 1c. per gallon was reported at Savannah at one time, the tone of primary centers was steadier later on, with trade sentiment there apparently more bullish.

Weather conditions in the South were generally more favorable for operations and the movement of turpentine from the interior to the seaboard showed a tendency to increase though the arrivals were below the expectations of some in the trade here. Receipts at the three principal markets during the first five months of the season were about 36,000 barrels smaller than in the same time last season, and it is contended that the movement during the last half of the year is likely to continue to run behind the previous season as something like 60 percent of the crop is believed to have been marketed.

Savannah again reported liberal shipments of rosin last week, but receipts were free and stocks there did not show much change for the week. demand fairly active. Following is a record of the market for the week:—

	Barrels		
	Receipts.	Shipments.	Stocks.
Wednesday	96	160	21,167
Thursday	272	...	21,132
Friday	170	162	21,447
Saturday	354	259	21,542
*Monday	...	...	.....
Tuesday	86	142	21,466

* Holiday.

Chicago Turpentine

CHICAGO, Sept. 7, 1928.

Buyers were out after lower prices in the Chicago turpentine market and as a result brought about price reductions of around 2 cents a gallon from the prices a week previous. Still, there was little buying done, in comparison with the heavy receipts reported. Both jobber and consumer purchases were light. Ruling quotations per gallon at the close of business last night were:—Five-drum lots, 51c.; single drums, 56c.; five-barrel lots, 56c.; single barrels, 61c.

English Turpentine Prices

Quotations on turpentine in London and Liverpool during last week were:—

	Per cwt. in barrels— London.		Liverpool.	
	s.	d.	s.	d.
Saturday	41	3	42	9
Monday	..	..	..	..
Tuesday	40	6	42	9
Wednesday	40	6	42	0
Thursday	40	6	42	0
Friday	41	0	42	0

Current prices on naval stores, formerly printed on page 4, are now printed at the end of this market report.

The tone of the markets in the South showed improvement, however, owing to an increase in demand from domestic buyers. There were also reports of a better export inquiry.

Receipts of rosin in the three chief markets in the South during the first five months of the season were about 130,000 barrels smaller than in the corresponding period last year, but stocks in those markets at the close of August were about 10,000 barrels larger than a year ago.

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

London Turpentine Stocks

Stocks of American turpentine in London September 6 were 36,012 barrels.

French Naval Stores

WASHINGTON, Sept. 7, 1928.

The market for naval stores in the Landes District was quiet during August, according to a cable from Consul Lucien Memminger, Bordeaux, made public by the Department of Commerce.

Prices quoted for export were 385 francs per 100 kilos ($0.477 per gal.) for turpentine, 211 francs per 100 kilos ($8.67 per 280 pounds) for W. W. rosin, and 195 francs per 100 kilos ($8.02 per 280 pounds) for F. B. rosin.

The fifth dip is reported proceeding normally, the prolonged dry weather having been broken by rains. This year's production through August is probably 15 percent greater than for the same period last year. However, production in 1927 was considered 15 percent below normal, and is unofficially placed at 160,000 barrels of 60 kilos net for turpentine and, 243,000 barrels of 370 kilos net for rosin.

Turpentine

The local market for turpentine was more active last week though buyers in some cases were still averse to purchasing ahead to any extent. Changes in prices were narrower, quotations at the close of the week being 52c. to 53c. per gallon, the same as in the previous week. A further decline occurred in the South at one time, but the tone of primary markets was steadier later on. There was a fairly active demand in the South. Steam distilled wood turpentine was maintained by one producer at 47c. per gallon, f.o.b. distributing points, effective during the week of September 10.

Savannah Turpentine

SAVANNAH, Sept. 7, 1928.

Demand for turpentine was fairly active and the market was steady. Following is a record of the market for the week:—

	Price per gal.	Barrels Sales.	Receipts.	Shipments.	Stocks.
Saturday	$0.45¾	484	597	...	24,166
*Monday	...	...	...	...	...
Tuesday	.45½	1,092	660	2,335	22,433
Wednesday	.45	1,020	1,794	...	24,227
Thursday	.45	758	1,147	2,625	22,749
Friday	.46¼	408	584	...	23,331

*Holiday.

Jacksonville Turpentine

JACKSONVILLE, Sept. 7, 1928.

Receipts of turpentine were rather free but a decrease in the movement is expected. Following is a record of the market for the week:—

	Price per gal.	Barrels Sales.	Receipts.	Shipments.	Stocks.
Saturday	$0.45½	...	267	205	28,348
*Monday	...	...	...	...	...
Tuesday	.45	604	1,175	296	29,227
Wednesday	.45¼	421	829	55	30,001
Thursday	.45½	465	849	10	30,840
Friday	.46¼	118	560	162	31,298

*Holiday.

Pensacola Turpentine

PENSACOLA, Sept. 4, 1928.

The turpentine market was steady, with

Savannah Rosin

SAVANNAH, Sept. 7, 1928.

The rosin market was steady, price movements being moderate. Following is a record of the market for the week:—

	Price per unit, low of range quoted— Sat.	*Mon.	Tues.	Wed.	Thurs.	Fri.
B	$7.50	...	$7.45	$7.40	$7.75	$7.90
D	7.50	...	7.45	7.40	7.75	7.90
E	7.50	...	7.45	7.40	7.75	7.90
F	7.50	...	7.45	7.40	7.75	7.90
G	7.50	...	7.45	7.40	7.75	7.90
H	7.50	...	7.45	7.40	7.75	7.90
I	7.50	...	7.45	7.40	7.75	7.90
K	7.50	...	7.45	7.40	7.75	7.90
M	7.55	...	7.50	7.45	7.75	7.80
N	7.75	...	7.75	7.75	8.00	8.05
W. G.	8.75	...	8.75	8.75	8.90	9.00
W. W.	9.00	...	9.00	9.00	9.10	9.30
X	9.00	...	9.00	9.00	9.10	9.30
	Barrels					
Sales	2,132	...	641	1,197	1,670	1,566
Receipts	1,882	...	2,038	5,632	1,830	1,868
Shipments	...	...	7,652	...	6,353	3,436
Stocks—	128,810	...	123,196	128,799	126,276	124,756

* Holiday.

Valuable information on Imports and Exports of Naval Stores is given in port lists beginning on page 5.

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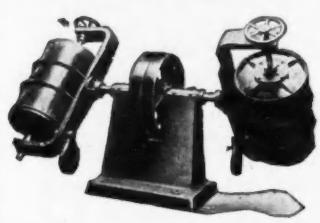
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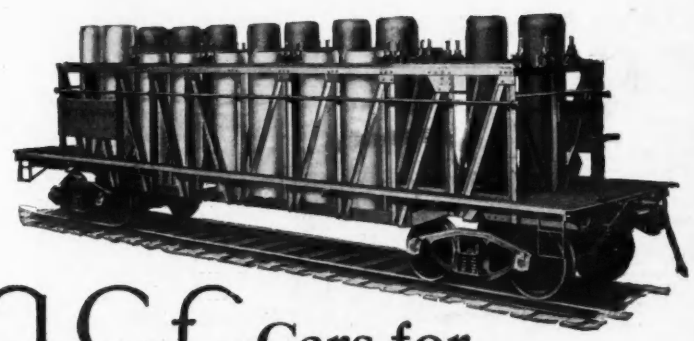
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Jacksonville Rosin

JACKSONVILLE, Sept. 7, 1928.

Demand for rosin was fairly active and the market was steady. Following is a record of the market for the week:—

	Price per unit, low of range quoted					
	Sat.	*Mon.	Tues.	Wed.	Thurs.	Fri.
B	$7.50	...	$7.40	$7.45	$7.60	$7.90
D	7.50	...	7.40	7.45	7.60	7.90
E	7.50	...	7.40	7.45	7.60	7.90
F	7.50	...	7.40	7.45	7.60	7.90
G	7.50	...	7.40	7.45	7.60	7.90
H	7.50	...	7.40	7.45	7.60	7.90
I	7.60	...	7.40	7.50	7.60	7.90
K	7.70	...	7.45	7.50	7.60	7.90
M	7.85	...	7.45	7.50	7.65	8.00
N	8.00	...	7.65	7.75	7.90	8.10
W. G.	8.75	...	8.65	8.75	8.90	9.10
W. W.	9.20	...	8.90	9.00	9.15	9.35
X	9.20	...	9.00	9.00	9.15	9.35
	Barrels					
Sales	992	...	1,664	1,070	1,609	953
Receipts	945	...	3,475	2,718	2,676	3,037
Shipments	1,415	...	563	501	61	1,194
Stocks	77,063	...	79,975	82,192	84,809	86,652

* Holiday.

Pensacola Rosin

PENSACOLA, Sept. 4, 1928.

The movement of rosin was moderate, with the market steady. Following is a record of the market for the week:—

	Barrels					
	Wed.	Thurs.	Fri.	Sat.	*Mon.	Tues.
Receipts	156	913	645	727	....	291
Shipments	300	190	100	1,031	....	100
Stocks	21,766	22,511	23,056	22,752	....	22,943

* Holiday.

Chicago Rosin

CHICAGO, Sept. 7, 1928.

The local rosin market underwent a sharp price decline in the past week, with offerings constituting a larger volume than indifferent buyers were willing to absorb except at marked price recessions, which occurred to the extent of 40 to 80 points. Reports are that buyers are trying to get still lower quotations. Ruling quotations per unit of 280 pounds at the close of business last night were:—B grade, $10; G grade, $10; M grade, $10.10; W. W. grade, $11.50.

London Rosin Prices

Quotations on rosin per hundredweight in barrels in London during last week were:—

	Common.		Water white.		Type G.	
	s.	d.	s.	d.	s.	d.
Saturday	21	3	26	6	21	3
Monday	..	..	..	..	..	..
Tuesday	21	3	26	6	21	3
Wednesday	21	3	26	6	21	3
Thursday	21	3	26	6	21	3
Friday	20	9	20	6	20	9

Liverpool Rosin Prices

Quotations on common rosin in Liverpool last week were as follows:—

	Per cwt. In barrels.	
	s.	d.
Saturday	21	6
Monday	..	..
Tuesday	21	6
Wednesday	21	0
Thursday	21	0
Friday	21	0

Other Naval Stores

Pine Oil.—A somewhat better inquiry was noted, but actual business was apparently still on a conservative scale, consumers being averse to anticipating. The market was steady.

Pitch.—There was little snap to business, but a fair inquiry was noted in some quarters from local and outside buyers. The market was firmer, with offerings light.

Rosin Oil.—Demand was fair, though consumers were not inclined to purchase ahead to any extent as a rule. The market retained a steady tone.

Tar.—Kiln burned was steady, with the inquiry fair and offerings light on spot. Demand for retort was moderate and the market was steady.

Current Prices

(For late price changes, see page 2)

Turpentine spirits, gum ex-yard, barrels	gal.	.52 @	.53
wood, destructive distillation barrels	gal.	.35	Nom.
steam distilled, drums	gal.	.47 @	.48
Rosin (prices on spot per unit of 280 lbs.)—			
gum, B, barrels		9.25 @	—
D, barrels		9.25 @	—
E, barrels		9.30 @	—
F, barrels		9.30 @	—
G, barrels		9.40 @	—
H, barrels		9.40 @	—
I, barrels		9.40 @	—
K, barrels		9.45 @	—
M, barrels		9.45 @	—
N, barrels		9.55 @	—
W.G., barrels		10.35 @	—
W.W., barrels		10.90 @	—
wood		7.55 @	—
f.o.b. works		6.75 @	—
Gum thus, barrels		19.00 @	—
strained, barrels		19.00 @	—
Pine oil, steam distilled, straw color, barrels	gal.	.63 @	.64
water white, barrels	gal.	.66 @	.67
Pitch, barrels	bbl.	8.00 @	8.50
Rosin oil, first rectified, drums	gal.	.60 @	—
second rectified, drums	gal.	.70 @	.72
third rectified, drums	gal.	.76 @	.80
Tar, kiln burned, barrels	bbl.	12.50 @	13.00
retort, barrels	bbl.	12.50 @	13.00
Tar oil, commercial, barrels	gal.	.42 @	—
refined, barrels	gal.	.50 @	—

L. C. Green, assistant manager of the New York office of the Columbia Naval Stores Company, Savannah, returned September 4 from a vacation in the Catskill Mountains.

L. R. Potter, vice-president of the Columbia Naval Stores Company, Savannah, who has been in poor health recently, left September 1 for Clifton Springs, N. Y., to recuperate.

Imports of Chemicals and Allied Products

Detailed List of Articles Entered for Consumption During Month of June

(Compiled by the Department of Commerce)

Animal Products, Inedible (Free List)

	Unit.	Quantity.	Value.
Bones, crude	lb.	10,875,760	$164,604
Hoofs, horns, horn strips and tips	lb.	36,144	3,613
Glue stock, hide cuttings, raw ossein and glue stock, n.s.p.f.	lb.	2,729,921	173,135
Beeswax and other animal wax	lb.	417,821	151,760
Rennets	lb.	4,920	3,571

Animal Products, Inedible (Dutiable)

Gelatin, inedible and manufactures of valued at less than 40c. per lb.	lb.	19,025	3,828
40c. or more per lb.	lb.	342,997	34,802
manufactures, n.e.s.	lb.	279,121	62,395
Glue, glue size and fish glue valued at less than 40c. per lb.	lb.	671,895	56,827
40c. per lb.	lb.	619	291
Casein glue, isinglass and other fish sounds, cleaned, split or prepared	lb.	869	1,251
Manufactures of glue or glue size	lb.	157	252
Casein or lactarene	lb.	2,664,514	329,590
Beeswax manufactures, white bleached	lb.	4,190	2,662
Casein compounds, galalith, etc., in blocks, sheets, etc.	lb.	18,251	7,297
unfinished. In finished or partly finished articles	lb.	94	83
	lb.	9,162	20,017

Varnish Gums and Resins (Free List)

Dammar	lb.	727,887	97,158
Kauri	lb.	372,103	45,601
Shellac	lb.	1,613,106	603,409
Lac, crude, seed, button and stick	lb.	763,859	248,597
Sandarac	lb.	4,354	974
Copal and other varnish gums (including Kongo, Manila, East India, anime acreoidis, Acca, varnish gums, n.s.p.f.	lb.	2,335,175	165,046

Turpentine, Tar and Pitch

Turpentine, spirits of	gal.	5,386	2,910
gum, including venice	lb.	2,205	401
Tar and pitch of wood	bbl.	720	6,003
Burgundy pitch	lb.	39,690	2,754

Gums and Resins (Free List)

Tragacanth	lb.	79,560	43,916
Asafetida	lb.	20,234	3,923
Benzoin	lb.	12,733	3,768
Kadaya (karoya) and talka	lb.	180,149	14,383
Mastic	lb.	3,861	1,795
Myrrh	lb.	7,474	2,302
Rosin	lb.	350,039	9,923
Tragasol	lb.	30,532	6,323
Gums and resins, n.s.p.f.	lb.	199,996	39,961

Gums and Resins (Dutiable)

Arabic or senegal (Acacia gum)	lb.	1,493,307	111,186
Amber and amberoid, unmanufactured	lb.	161	1,535
Rosin for violins	lb.	2,719	1,332

Crude Drugs (Free List)

Cinchona bark or other from which quinine may be extracted	lb.	289,516	79,166
Pyrethrum, or insecticide flowers	lb.	975,748	253,287
Senna	lb.	113,562	7,087
Aconite	lb.	6,667	987
Aloes	lb.	108,759	13,253
Althea or marshmallow flowers and leaves	lb.	1,985	104
Althea or marshmallow root	lb.	2,175	199
Arnica	lb.	2,549	2,398
Betel or areca nuts	lb.	33,731	1,292
Burdock	lb.	2,240	170
Cannabis	lb.	130	952
Camomile (chamomile) flowers	lb.	5,504	718
Clover flowers	lb.	2,161	142
Colocynth	lb.	27,686	9,623
Cubebs	lb.	15,898	4,689
Fenugreek seed	lb.	45,018	1,470
Ginseng	lb.	24	407
Hoarhound	lb.	2,332	103
Ipecac	lb.	1,591	4,478
Jalap	lb.	18,010	2,068
Lavender flowers	lb.	4,613	933
Manna	lb.	12,737	4,237
Nux vomica	lb.	571,708	14,698
Orris or iris	lb.	54,987	4,130
Papaw juice or crude papain	lb.	15,474	45,925
Quassia	lb.	295,680	2,376
Rhubarb	lb.	13,340	4,239
Scammony	lb.	9,080	296
Soap bark or quillaya	lb.	104,672	9,104
Valerian	lb.	3,136	268
Other roots in a crude state, n.s.p.f.	lb.	25,397	5,920
Barks not edible, crude	lb.	17,492	2,935
Drugs, of vegetable or animal origin not edible, crude, not containing alcohol, n.s.p.f.	lb.	791,272	88,986

Crude Drugs (Dutiable)

Licorice root	lb.	5,293,011	138,606
extract in paste, rolls, or any other form	lb.	41,482	7,579
Opium, containing 8.5 percent and over of anhydrous morphine, crude	lb.	8,679	33,332
Belladonna	lb.	17,795	1,769
Buchu leaves	lb.	8,484	1,834
Coca leaves	lb.	15,514	2,793
Gentian	lb.	3,481	237
Lupulin	lb.	3,708	3,463
Sarsaparilla root	lb.	4,576	898
Stramonium	lb.	2,260	172
Pyrethrum or insect flowers	lb.	15,006	4,375
Drugs advanced, n.s.p.f.	lb.	60,743	14,488

Vegetable Oils (Free List)

Chinawood oil	lb.	16,224,800	1,199,970
Vegetable wax, n.s.p.f.	lb.	247,264	59,980

Vegetable Oils (Dutiable)

Linseed oil, raw, boiled, or oxidized	lb.	6,626	604

Essential and Distilled Oils (Free List)

Cassia and cinnamon	lb.	28,524	32,730
Geranium	lb.	13,540	47,611
Roses, otto of	oz.	1,792	17,442
Bergamot	lb.	5,666	28,545
Citronella and lemon grass	lb.	174,348	76,557
Lavender	lb.	6,288	20,045
Spike lavender	lb.	6,757	5,459
Almond, bitter	lb.	1,060	1,900
Anise	lb.	231	177
Camphor (oils)	lb.	393,575	35,477
Caraway	lb.	1,094	1,489
Cananga or ylangylang	lb.	5,387	27,102
Lime	lb.	406	3,821

Essential and Distilled Oils (Free List)

	Unit.	Quantity.	Value.
Lignaloe or bois de rose	lb.	24,105	36,088
Orange flower or neroli	lb.	22	1,947
Origanum	lb.	50	27
Palmarosa	lb.	20	165
Petitgrain	lb.	3,617	5,636
Rosemary	lb.	13,254	5,577

Essential and Distilled Oils (Dutiable)

Lemon (including terpenless)	lb.	43,980	99,095
Orange (including terpenless)	lb.	13,386	70,536
Sandalwood	lb.	770	1,920
Cajeput	lb.	2,152	1,457
Cedrat or citron	lb.	110	292
Clove	lb.	56	129
Eucalyptus	lb.	37,328	12,855
Juniper	lb.	105	205
Orris	lb.	3	363
Patchouli	lb.	26	146
Vetiver oil	lb.	710	3,244
Oils, n.s.p.f., not containing alcohol	lb.	67,063	15,051

Dyeing and Tanning Materials Not Containing Alcohol (Free List)

Logwood	ton	1,075	20,108
Nutgalls and gall nuts	lb.	103,780	12,907
Crude articles, n.s.p.f., for dyeing, coloring, or staining	lb.	394,684	2,587

Extracts for Dyeing, Coloring or Staining (Dutiable)

Chlorophyll	lb.	930	1,320
Logwood	lb.	6,659	1,140

Camphor (Dutiable)

Camphor, natural, crude	lb.	399,999	154,800
refined	lb.	121,700	62,302
synthetic	lb.	65,654	23,677

Balsams, Crude (Dutiable)

Copaiba	lb.	27,864	6,042
Fir, or Canada	lb.	1,334	1,749
Peru	lb.	5,821	7,675
Tolu	lb.	6,857	3,830
Styrax	lb.	3,168	756

Miscellaneous Vegetable Products (Dutiable)

Agar-agar	lb.	38,941	27,150
Teazles	lb.	14,472	4,186

Nonmetallic Minerals (Free List)

Chalk, unmanufactured	ton	5,290	6,078
Pyrites or sulphuret of iron in natural state and spent oxide of iron containing more than 25 percent of sulphur	ton	35,351	82,190
Sulphur and sulphur ore	ton	3,094	11,608
in other forms	lb.	25,549	3,026

Nonmetallic Minerals (Dutiable)

Chalk, precipitated	lb.	358,726	11,657
Arsenic, metallic	lb.	11,023	2,030

Crude Coaltar Products (Free List)

Dead or creosote oil	gal.	6,251,355	1,070,024
Pyridin	lb.	810	304
Anthracene oil	gal	4,768	1,029
Benzene	lb.	661,610	13,912
Naphthalene solidifying at less than 79° C.	lb.	908,876	17,796
Cresylic acid	lb.	767,240	48,408
Crude, coal, blast furnace, oil gas, and water gas tar	bbl.	86	507
All other distillates, n.s.p.f., which yield in distilling below 190° C., a quantity of tar acids, less than 5 percent of the original distillate	lb.	66,741	2,698
All other products found naturally in coaltar, whether produced from coaltar or other source, n.s.p.f.	lb.	6,394	710

Medicinal and Pharmaceutical Preparations (Free List)

Quinine sulphate	oz.	168,256	67,821
alkaloid	oz.	1,000	497
other salts and derivatives of	oz.	15,000	5,600
Cinchonine and its salts	oz.	3,000	608
Quinidine and its salts	oz.	1,000	330
Antitoxins, serums, vaccines, viruses, and bacterins for therapeutic purposes	oz.	204	390
Cantharis and other blistering beetles	lb.	1,000	203
Cinchonidine and its salts,	oz.	30,168	7,856

Medicinal and Pharmaceutical Preparations (Dutiable)

Other alkaloids, salts, and derivatives, n.s.p.f.	lb.	17,371	23,943
Menthol	lb.	7,869	26,114
Suprarenal preparations and thyroid and other gland extracts	lb.	1	139
Diethylbarbituric acid and derivatives	lb.	1,335	11,120
Salicin	oz.	3,584	738
Santonin and salts	lb.	10	1,225
Plasters, healing or curative, and court-plaster	lb.	900	699
Thymol	lb.	784	1,335
Medicinal chemicals of vegetable origin, n.s.p.f.	lb.	1,000	6,481
Preparations in capsules, pills, powders, tablets, lozenges, troches, ampoules, tubes, or similar forms, when less than 25 percent	lb.	33,337	61,453
Medicinal preparations, n.s.p.f., not containing alcohol	lb.	86,567	56,926
20% or less alcohol	lb.	33,584	14,143
containing over 20 and not over 50% alcohol	lb.	48,061	16,729
over 50% alcohol	lb.	440	2,771

Acids and Anhydrides (Free List)

Arsenious acid or white arsenic	lb.	2,344,207	68,970
Sulphuric acid	lb.	2,886,998	14,052
Chromic acid and anhydrides	lb.	13,489	2,878

Acids and Anhydrides (Dutiable)

Formic acid	lb.	147,281	10,870
Oxalic acid (T.D. 40604)	lb.	80,912	4,287
Tartaric acid	lb.	146,157	46,848
Acetic acid, not more than 65%	lb.	794,781	36,092
more than 65%	lb.	473,411	56,807
Boric acid	lb.	44,102	1,774
Glycerophosphoric and salts and compounds	lb.	3,330	3,970

Acids and Anhydrides (Dutiable)

	Unit.	Quantity.	Value.
Lactic, 30% to 55% lactic acid	lb.	5,399	506
other, on which specific duty does not amount to 25%	lb.	29,726	9,622
Phosphoric acid	lb.	9,941	1,179
Acids and acid anhydrides, n.s.p.f.	lb.	2,861	1,336

Other Chemicals (Free List)

Copper sulphate (blue vitriol)	lb.	152,319	7,789
Iodine, crude	lb.	73,022	255,114
Potassium cyanide	lb.	11,243	4,471
nitrate, crude, or saltpeter	ton	3,025	106,913
Sodium cyanide	lb.	4,535,540	311,186
sulphate, crude (salt cake)	lb.	4,379,880	19,331
Radium salts	gr.	10	34,025
Arsenic sulphide, realgar, and orpiment	lb.	13,023	1,849
Calcium acetate, crude (brown and gray)	lb.	396,582	20,254
chloride	lb.	1,335,192	6,672
Copper, acetate and subacetate	lb.	1,602	272
Cyanide salts, mixtures and compounds, n.s.p.f.	lb.	33,964	16,085
Copperas	lb.	172,774	1,544
Mineral oil, medicinal	lb.	183,530	14,210
salts obtained by evaporation from mineral water	lb.	3,831	3,639
Sheep dip	lb.	46,500	5,515
Uranium oxide and salts	lb.	19,840	18,015

Other Chemicals (Dutiable)

Ammonium chloride, white	lb.	461,912	15,374
gray	lb.	331,700	11,265
nitrate	lb.	923,201	37,131
carbonate and bicarbonate	lb.	120,735	5,726
Barium chloride	lb.	196,732	2,156
hydroxide	lb.	55,351	1,526
nitrate	lb.	48,627	1,970
Calcium carbide	lb.	230,000	8,670
Cobalt oxide	lb.	24,505	46,689
Bleaching powder	lb.	248,215	5,848
Glycerin, crude	lb.	58,202	4,222
refined	lb.	2,172	392
Magnesium carbonate, precipitated	lb.	14,170	984
chloride, n.s.p.f.	lb.	623,592	4,420
oxide or calcined magnesia	lb.	11,332	2,705
Epsom salt	lb.	1,246,086	7,604
Magnesium silicofluoride or fluosilicate	lb.	43,410	2,704
Potassium carbonate	lb.	1,191,619	48,383
Caustic potash	lb.	1,282,062	73,631
Potassium bitartrate, crude, not more than 90%	lb.	1,162,715	118,511
Cream of tartar	lb.	2,240	484
Potassium chlorate	lb.	1,157,418	40,000
perchlorate	lb.	4,480	369
bicarbonate	lb.	88,373	4,597
chromate and bichromate	lb.	1,057	331
Potassium ferrocyanide	lb.	17,553	2,200
ferricyanide	lb.	17,749	5,603
iodide	lb.	4	16
nitrate, or saltpeter refined	lb.	724,857	28,702
permanganate	lb.	40,895	3,347
All potash salts, n.s.p.f.	lb.	10,117	1,789
Sodium ferrocyanide	lb.	166,449	13,959
nitrite	lb.	200	45
acetate	lb.	110,231	4,058
bisulphite, metabisulphite	lb.	151,214	3,379
chlorate	lb.	621,004	21,889
fluoride	lb.	143,808	7,903
formate	lb.	20,112	1,152
Caustic soda	lb.	2,300	394
Sodium hydrosulphite and compounds	lb.	8,310	1,579
phosphate	lb.	1,580,884	34,618
silicate	lb.	1,320	49
silicofluoride or fluosilicate	lb.	169,867	4,725
Soda and potassium tartrate (rochelle salts)	lb.	11,088	1,437
Sodium sulphate, anhydrous	ton	274	6,805
crystallized	ton	35	362
sulphide, not more than 35%	lb.	10,040	406
more than 35%	lb.	234,454	4,475
sulphite	lb.	92,043	2,799
compounds, n.s.p.f.	lb.	25,746	2,356
Butyraldehyde	lb.	7,513	1,352
Formaldehyde solution	lb.	4,188	194
Paraldehyde	lb.	100	28
Paraformaldehyde	lb.	3,913	829
Aluminum hydroxide (refined bauxite)	lb.	33,624	4,042
Potassium aluminum sulphate or potash alum	lb.	33,501	571
Aluminum sulphate, over 15% of alumina or not more than 1/10% of ferric oxide	lb.	358,807	1,798
salts and compounds, n.s.p.f.	lb.	925	154
Antimony oxide	lb.	449,388	34,725
sulphides, red and golden	lb.	56,475	4,540
salts and compounds, n.s.p.f.	lb.	11,079	1,734
Bromine compounds, n.s.p.f.	lb.	10	23
Calcium tartrate, crude	lb.	267,874	24,085
Cerium nitrate	lb.	55	19
salts, n.s.p.f.	lb.	5,267	401
Chloroform	lb.	6	12
Cobalt sulphate	lb.	3,000	1,738
salts and compounds, n.s.p.f.	lb.	3	4
Copper oxide and suboxide	lb.	2,016	243
Dextrin made from potato starch or potato flour	lb.	67,902	3,174
n.s.p.f., dextrin substitutes, burnt starch or British gum	lb.	14,023	463
Amyl acetate	lb.	50	33
Butyl acetate	lb.	523,191	70,334
Diethyl sulphate	lb.	2,205	473
Ethers and esters, n.s.p.f.	lb.	4,571	1,750
Flavoring extracts containing no alcohol	lb.	728	534
containing 20% or less alcohol	lb.	219	178
containing more than 20%, not more than 50% of alcohol	lb.	31	48
containing more than 50% alcohol	lb.	10,590	15,120
Guaiacol and derivatives	lb.	220	240
Hexamethylenetetramine	lb.	772	323
Hydrogen peroxide	lb.	2,145	479
Iron perchloride	lb.	27,874	1,115
Lead acetate, white	lb.	4,562	398
compounds, n.s.p.f.	lb.	50	18
Manganese compounds and salts, n.s.p.f.	lb.	12,888	849
Mercurous chloride (calomel)	lb.	229	312
Mercury preparations, n.s.p.f.	lb.	267	873
Pyroxylin, liquid solutions of, collodion and other cellulose esters or ethers	lb.	6,969	2,984

(Continued on page 32)

Flaxseed and Linseed OIL

Moderate Changes in Flaxseed Prices—Reports From Northwest Less Favorable—Good Cash Demand—Oil Easy

Changes in domestic and foreign flaxseed quotations last week were generally moderate. Crop accounts from the Northwest were less favorable. Considerable damage was said to have been done by recent frosts. Receipts were larger but there was a good cash demand and the premium was generally maintained. Trading in futures was quiet.

The Buenos Aires market closed at a small advance. Shipments from Argentina to the United States were smaller at 260,000 bushels against 429,000 in the previous week. Shipments to this country since January 1 have amounted to 10,024,000 bushels or nearly 4,000,000 less than in the same time last year. Exports from Argentina to all destinations last week were 1,901,000 bushels against 1,287,000 in the previous week and 1,480,000 last year; there was pretty good buying for shipment to outside mills. Eastern crushers are putting away a little seed here, and are also endeavoring to accumulate cargoes for shipment from Duluth. There is apt to be stiffening of competition between Eastern and local crushers unless more of the movement is not headed in the direction of Duluth.

Local stocks are gaining slightly, the increase in four days being 10,000 bushels. There were no deliveries on September contracts Tuesday, but 2,000 bushels were tendered Wednesday.

Trade in the pit is routine, more or less, and consists largely of placing or recovering of hedges. Crushers have not shown important interest in offerings during the past few days, as they were able to buy cash seed freely as a hedge against oil sales.

Crop news is not so good as recently. Very numerous reports of frost damage have been coming in from North Dakota and sections of Montana. The weather was pretty cold for nearly a week, and late sown fields suffered considerably. Threshing returns on early flax are rather good, running up to 14 bushels to the acre. However, between rust and frost damage, average yields will probably be lower than normal. Weeds in fields also tended to cut down the yield.

The week's closing range was as follows:—

	Cash.	Oct.	Dec.
Saturday	$2.03	$2.03½	$2.07
Monday	...	...	...
Tuesday	2.03¾	2.03¼	2.06¾
Wednesday	2.02¼	2.02	2.05½
Thursday	2.03¼	2.02¾	2.05⅝
Friday	2.04	2.04½	2.06¼

Daily receipts and shipments of domestic seed during the week ending September 7, 1928, and in the corresponding week last year, were, in bushels:—

	Receipts 1928	Receipts 1927	Shipments 1928	Shipments 1927
Saturday	90,000	97,600	40,670	21,000
Monday	*	*	*	*
Tuesday	352,500	342,820	13,040	16,000
Wednesday	143,820	83,220	39,520	54,900
Thursday	171,360	121,180	30,400	39,040
Friday	220,320	148,920	13,680	23,180
Totals	978,000	793,740	137,310	164,120

* Holiday.

Current prices on linseed oil and cake and meal, formerly printed on page 3, are now printed at the end of this market report.

since January 1, 53,596,000 bushels against 55,032,000 bushels in the same time last year.

Linseed oil was easy with a fair demand. Cake and meal were steady.

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Flaxseed

DULUTH, Sept. 7, 1928.

Trading in the flaxseed market was marked by extreme dullness during the last week, but the price trend was upward. Crushers continued to mark time, contenting themselves with taking up the few cars that appeared on the tables from day to day at unchanged premiums. The opening of a liberal movement to this market is looked for during the coming week, and it promises to be well taken care of, as considerable seed has been bought to arrive to cover contracts. From all accounts, growers have made progress in threshing lately under dry weather conditions. Growers are figuring that the money value of the crop at around present prices will be proportionately larger than wheat and other feed grains. All but a small proportion of the late sown flax will mature, according to information received by dealers. A cargo of 94,240 bushels of flax was shipped by a crusher to Buffalo last week and boat space has been taken for more shipments during the next ten days.

The week's closing range was as follows:—

	Cash.	Oct.	Dec.
Saturday	$2.06½	$2.06	$2.08¼
*Monday	...	...	...
Tuesday	2.06	2.06	2.07½
Wednesday	2.05¾	2.05½	2.07
Thursday	2.06	2.05¾	2.07
Friday	2.07¼	2.07	2.07⅞

* Holiday.

Daily receipts and shipments of domestic seed during the week ending September 7, 1928, and in the corresponding week last year were, in bushels:—

	Receipts 1928.	Receipts 1927.	Shipments 1928.	Shipments 1927.
Saturday	54,480	1,360	94,240	....
Tuesday	3,718	5,420	....	....
Wednesday	4,220	8,146	....	....
Thursday	14,108	....	....	....
Totals	76,626	37,698	94,240	....
From Aug. 1 to date	217,440	100,641	273,573	337,732
In public warehouses	122,000	361,000	....	....

Minneapolis Flaxseed

MINNEAPOLIS, Sept. 7, 1928.

Demand for cash flaxseed is good and the liberal offerings are being absorbed readily at premiums elevator operators do not care to pay. Bulk of the No. 1 seed is selling at 1c. to 1½c. over September, up to 11 percent moisture test. Dry Western quality will bring 2c. over, while the high moisture quality sells down around September price. Receipts for the first few days in September show a larger total than a year ago despite the smaller crop, and the farmers seem anxious to dispose of their offerings. Some of them are taking storage tickets and some are selling outright. There has been enough buying of September futures against storage tickets to help stabilize the market more or less. Shipping advices are fairly good, but not as good as they were. While liberal receipts are expected in the future, there will be a slight lull to make up for a week of rainy weather conditions in the country.

The bulk of the movement to date has been in the direction of Minneapolis. Local crushers bought the large portion of offerings, but

Flaxseed Receipts at New York

There were no receipts of flaxseed at New York last week. Total receipts since January 1 are as follows:—

	Bushels Domestic.	Bushels Foreign.
This year	48,000	9,224,358
Last year	1,500	15,102,274

Chicago Flaxseed Movement

CHICAGO, Sept. 7, 1928.

There were no receipts or shipments of flaxseed for the week ended today. The movement since January is as follows:—

	Bushels Receipts.	Bushels Shipments.
This year	1,778,000	165,000
Last year	1,741,000	2,000

Winnipeg Flaxseed

WINNIPEG, Sept. 5, 1928.

The market for futures continued quiet. There was a fair demand for cash seed. Receipts were moderate. Crop news was conflicting. The week's closing range was as follows:—

	Cash.	Oct.	Dec.
Saturday	$1.86½	$1.87½	$1.81
Monday	...	...	...
Tuesday	1.84½	1.85½	1.79
Wednesday	1.82	1.83½	1.77½
Thursday	1.83¼	1.83¾	1.77⅞
Friday	1.84	1.85¼	1.79¾

Canadian Flaxseed Statistics

For the week ended August 31 and for the season from August 1:—

Stocks in Store	Bushels.
Fort William and Port Arthur	440,117
Interior elevators	57,219
Country elevators	32,698
Vancouver	.....
Total	530,034
Receipts During Week	
Fort William and Port Arthur	644
Interior elevators	1,446
Country elevators	5,314
Vancouver	.....
Total	7,404
Shipments During Week	
Fort William and Port Arthur	394,490
Interior elevators	9,130
Country elevators, rail	3,921
Vancouver	.....
Total	407,541
Since August 1:—	
Receipts	64,414
Shipments	558,182

Valuable information on Imports and Exports of Oils and Oil Materials is given in port lists beginning on page 5.

KELLOGG'S SPECIAL OILS

Improved Boiled	White Refined
Crystal Boiled	Pale Grinding
Double Boiled	Improved Raw
Diamond K	Non-Break
White Diamond K	Kellogg's Varnish Oil
Heavy-Bodied Boiled	Superior
Aged	Superflo Grinding

Superflo Boiled

Pale-Bodied Varnish Oil

EACH of these oils is on the market because, better than any other, it fills certain purchasers' needs. This means that it has helped such a purchaser to increase his profits. The Kellogg representative can supply detailed information about any with which you are unfamiliar.

SPENCER KELLOGG and SONS, Inc.

Linseed Oil Department

BUFFALO, N. Y.

New York Office: Graybar Building

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With Nature offering her best creations . . . with The Ambassador doing its best for your creature comforts . . . the combination is unbeatable.

Check the calendar and your bag . . . and check that idea about "not having time". You have.

The Ambassador

ATLANTIC CITY

Buenos Aires Flaxseed

Flaxseed was irregular, closing firmer. Opening prices per bushel on October contracts were:—

	Last week.	Last year.
Saturday	$1.63½	$1.65½
Monday	...	...
Tuesday	1.61¾	1.66
Wednesday	1.61¾	1.66¾
Thursday	1.64	1.71¾
Friday	1.64	1.71¾

Exports

To—	Bushels Last week.	Previous	Last year.
United States	200,000	429,000	264,000
United Kingdom	43,000	51,000	.....
Continent	878,000	319,000	384,000
Orders	720,000	484,000	820,000
Others	.....	4,000	12,000
Totals	1,901,000	1,287,000	1,480,000

Since January 1

To—	Bushels This year.	Last year.
United States	10,024,000	13,956,000
United Kingdom	2,675,000	4,436,000
Continent	19,530,000	18,196,000
Orders	21,367,000	18,444,000
Totals	53,596,000	55,032,000

Visible Supply

	Bushels.
Last week	3,543,000
Previous week	3,937,000

Indian Flaxseed Exports

To—	Bushels Last week.	Previous week.	Last year.
United Kingdom	8,000	8,000	168,000
Continent	136,000	16,000	6',000
Totals	144,000	24,000	228,000

Since April 1:—	Bushels This year.	Last year.
United Kingdom	504,000	1,232,0 0
Continent	2,336,000	2,110,000
Totals	2,840,000	3,342,000

London Flaxseed Prices

Quotations on Calcutta flaxseed at London last week were:—

	Per ton £	s.	d.
Saturday	17	10	0
Monday	..	..	..
Tuesday	17	10	0
Wednesday	17	10	0
Thursday	17	10	0
Friday	17	10	0

Hull Flaxseed Prices

Quotations on flaxseed at Hull last week were:—

	Per ton La Plata.	Calcutta.
Saturday	£15¼	..
Monday	...	...
Tuesday	15¼	£17⅝
Wednesday	15¼	17⅝
Thursday	15¼	..
Friday	15¼	..

Antwerp Flaxseed Prices

Following are the quotations on flaxseed in Antwerp for the week:—

	Per 100 kilos. francs.
Saturday	306
Monday	...
Tuesday	304
Wednesday	303
Thursday	305
Friday	305

Linseed Cake and Meal

A good export inquiry continued to be reported for cake, and offerings on spot and for nearby shipment were still light. Demand for meal was quiet here, but some improvement was reported in the inquiry at outside points. The market had a steady tone.

Minneapolis Linseed Meal

MINNEAPOLIS, Sept. 7, 1928.

Nothing new can be said of the meal market for the past week. Output remains light, and demand just about cares for the quantity made by mills. Most of the buying concerns carload lots for immediate or 10-day shipment. A few sales for 15 days' shipment reported. There is still some of the recent accumulation left, but the crushers hope to get rid of same before they increase their operations noticeably to take care of shipping instructions on oil.

Quotations on carload lots, f.o.b. Minneapolis, 100-pound sacks, $44.50 to $45 per ton. Daily shipments of linseed oil meal and cake during the week ending September 7, 1928, and in the corresponding week last year, were, in pounds:—

	1928	1927
Saturday	807,366	545,605
Monday	*	* .....
Tuesday	517,525	567,287
Wednesday	614,200	1,208,340
Thursday	846,265	786,560
Friday	709,491	731,630
Totals	3,494,757	3,839,422

* Holiday.

Chicago Linseed Meal

CHICAGO, Sept. 7, 1928.

With sales to milling interests apparently predominating in the dealings, there was a considerably improved spirit and tone prevailing in the linseed meal market here, with prices showing little or no improvement on the whole. The general market price range was $47 to $47.50, with resale material seemingly ruling close to $47. The round lot dealings as yet are not comprising an important portion of the transactions. Most buyers figure that there will be plenty of the product and are in no hurry. Ruling quotations per ton were:—Car lots, $47 to $47.50; less than car lots, $50.

Linseed Oil

The local market for linseed oil had an easy tone last week and shading of prices was noted. At the close of the week oil was obtainable at 9.5c. per pound in car lots in cooperage and it was said to be possible to purchase at a shade under that figure on a firm bid.

A fair demand was noted in some quarters in a jobbing way but many large consumers in the paint and linoleum industries were disposed to hold off for the monthly government flaxseed crop report which is due early this week. There was a fair movement on contracts and consumption appeared to be well up to normal for this period of the year.

Changes in flaxseed prices in foreign and domestic markets were moderate. Buenos Aires closed at an advance. A good demand was reported for cash seed in domestic markets. Receipts at the Northwest were larger. Crop accounts, however, were less favorable. Considerable damage from recent frosts was reported and there were also unfavorable reports concerning the oil content of the seed.

Minneapolis Linseed Oil

MINNEAPOLIS, Sept. 7, 1928.

Reports on oil trade continue spotted, but on the whole there seems to be a normal fall business prevailing. Prices have shown no change of importance for some time past and buying seems to be based on moods rather than on fluctuations. The tendency to buy for shipment after the turn of the year is becoming a little more pronounced, but most of the business concerns shipment before the end of the present year.

As far as reports go, there is no evidence of any important round lot business covering annual requirements. Most of the buyers have contracted for at least a fair portion of the oil they will need this fall and during the early winter. Because of low prices prevailing the buying has been more general in character than usual. Sales of tank lots are frequent and probably represent the bulk of the trade. Demand for warehouse lots is good and steadier than expected.

Shipping instructions on maturing contracts are fair to good. Good instructions are expected on contracts made for shipment during the first half of September. August contracts were cleaned up in pretty good shape, though some business was carried over into September.

Prices quoted at 9.5c. per pound on car lots; cooperage, 8.7c. per pound in tankcar lots, and 9.9c. per pound in warehouse lots.

Daily shipments of linseed oil during the week ending September 7, 1928, and in the corresponding week last year, were, in pounds:—

	1928	1927
Saturday	463,583	363,010
Monday	*	* .....
Tuesday	1,012,764	552,960
Wednesday	673,936	620,751
Thursday	605,809	341,599
Friday	614,365	288,974
Totals	3,370,457	2,167,294

* Holiday.

Chicago Linseed Oil

CHICAGO, Sept. 7, 1928.

There was a good deal more interest and activity clocked in the linseed oil market here the past week, although there have been some backward and forward trends in the price movements, the general tone seems to be toward easier profits. Sellers have been willing to make concessions in order to move material, and buyers for the most part have been waiting for such reductions before placing their business. Ruling quotations per pound were:—Tankcars, September-October, 8.5c.; cooperage, car lots, September-October, 9.3c.; warehouse deliveries, 9.5c.

Antwerp and London Oil

Quotations on linseed oil in Antwerp and London last week were:—

	Antwerp, per 100 kilos. francs.	London, per cwt. s.	d.
Saturday	480	27	7½
Monday	...	..	..
Tuesday	477	27	7½
Wednesday	475	27	7½
Thursday	475	27	7½
Friday	477	27	9

Current Prices

(For late price changes, see page 2)

Linseed oil, boiled, tanks	lb.	.0910@.0920
car lots, barrels	lb.	.0990@.1000
less car lots, barrels	lb.	.1040@.1050
less than 5 barrels	lb.	.1090@.1100
double boiled, less than 5 barrels	lb.	.1110@.1120
raw, tanks	lb.	.0870@.0880
car lots, barrels	lb.	.0950@.0960
less than car lots, barrels,	lb.	.1000@.1010
less than 5 barrels	lb.	.1030@.1060
refined, barrels	lb.	.1040@.1100
varnish grades, barrels	lb.	.1060@.1120
Linseed cake, bags	ton.	46.50 @47.00
meal, bags	ton.	55.50 @ —

N. F. A. Issues Proceedings

The printed proceedings of the fourth annual convention of the National Fertilizer Association has been distributed from the office of the secretary, Charles J. Brand, Washington. The book is a paper-bound volume of 180 pages, containing, in addition to the convention business, a list of the officers and directors and of those who attended the meeting. A copy of the code of trade practices of the fertilizer industry, suitable for hanging on a wall, is pasted in the book.

Fertilizer Freights Stand

WASHINGTON, Sept. 3, 1928.

The Interstate Commerce Commission has granted the petition of the railroads for a postponement of the effective date of the order establishing a low mileage scale of freight rates on fertilizer and fertilizer materials in Central Freight Association territory. The new rates were to have gone into effect October 5, but have been postponed until December 5.

David H. Scott, of the East Coast Fertilizer Company, Wilmington, N. C., was in this city September 4. Mr. Scott recently returned from Europe.

Coaltar Dye Marketing Possibilities in India

German Products Constitute an Increasing Proportion of Large Imports

The recognized importance of India as a market for coaltar dyes is certain to be increased as the purchasing power of the people improves, says W. Keblinger, consul at Bombay, in a special report prepared for the chemical division of the Bureau of Foreign and Domestic Commerce, Department of Commerce. A large portion of the dyes imported into India, the total of which is now above 15,000,000 pounds a year, came in through Bombay. Germany, which had almost a monopoly of this trade before the World War, is rapidly increasing its share.

The following countries participate in the coaltar dye trade in India (in the order of their importance):—Germany, United States, Switzerland, Great Britain, Belgium, France, Japan. Imports shown in the tables below as coming from the Netherlands may be taken as having originated in Germany. The import figures for anilin and alizarin dyes in 1926 and 1927, with the percentage of each country with respect to the entire trade, are given below:—

1926 Imports

	Anilin, pounds.	Percent.	Alizarin, pounds.	Percent.	Total, pounds.	Percent.
United Kingdom	349,353	3.9	565,824	14.0	915,177	7.0
Germany	5,396,122	59.7	2,243,927	55.6	7,640,049	58.5
Netherlands	468,900	5.2	951,819	23.5	1,420,719	10.9
Belgium	314,810	3.5	133,866	3.3	448,676	3.4
Switzerland	464,568	5.1	80,836	2.0	545,404	4.2
United States	1,729,549	19.1	.....	...	1,729,549	13.2
Other countries	314,438	3.5	52,991	1.6	367,429	2.8
Totals	9,037,740		4,029,263		13,067,003	

1927 Imports

	Anilin, pounds.	Percent.	Alizarin, pounds.	Percent.	Total, pounds.	Percent.
United Kingdom	410,192	3.4	1,277,987	23.9	1,688,179	9.6
Germany	8,265,757	67.9	3,134,024	58.6	11,399,781	65.1
Netherlands	229,214	1.9	521,364	9.7	750,578	4.3
Belgium	230,281	1.9	121,830	2.3	352,111	2.0
France	130,035	1.0	9,495	0.2	139,530	0.8
Switzerland	508,128	4.2	92,186	1.7	601,314	3.4
Italy	566,079	4.6	116,436	2.2	682,515	3.9
Japan	19,690	0.2	.....	...	19,690	0.1
United States	1,349,419	11.1	75,707	1.4	1,425,126	8.1
Other countries	464,103	3.8	.....	...	464,103	2.7
Totals	12,172,898		5,350,029		17,522,927	

Imports from Germany in 1927, including those shown as coming from the Netherlands, represent practically 70 percent of the total trade. The United States is a poor third, with 8.1 percent. If anilin dyes are taken separately, the United States is second, with 11.1 percent. Actual imports shown as coming from Italy may be considered as having originated in Switzerland. The principal American importer brings in its product in concentrated quantities, which would ordinarily add about 25 percent to the total number of pounds imported from the United States. Imports from "other countries" may be considered for the most part as transfers of stock from China and Japan and numerous other places which actually originated in the countries shown on the table of imports.

The alizarin dye business is done almost wholly by Germany and Great Britain, with Germany taking approximately 70 percent; the United Kingdom, 23.9 percent, and the United States and Switzerland taking negligible amounts.

Imports of sulphur black and congo red in 1926-27 were as follows:—

Sulphur Black

	Pounds.
1926	2,134,805
1927 up to October 1	2,698,475

Congo Red

1926	778,258
1927	806,765

From these figures the conclusion would be drawn that the consumption of dyes in India had increased largely in 1927 over 1926. Such an assumption would not be entirely correct as there was undoubtedly an overimportation of dyes in 1927, just as there was an underimportation during the previous year.

The total annual consumption of dyes in India, based on the import figures, running over a period of years, may be said to be approximately 15,000,000 pounds.

There are two separate and distinct markets for coaltar dyes in India, the bazar market and the mill trade. The colors sold in the bazar trade are largely reductions, or weak colors, which are reduced in order that they may be sold at a price which will enable the small dyers to buy a pound or half-pound tin. However, the bazar buyers in some sections are demanding more concentrated colors in larger containers, in order to reduce the ultimate cost. The mill trade is more or less confined to certain larger centers, Bombay, Ahmedabad, Cawnpore, Calcutta, Sholapur, Indore, Madras, Bangalore, Nagpur. There are also a number of mills of considerable importance scattered over other parts of the country.

Sulphur black, which has the greatest consumption in the mills, is consumed in large quantities in Bombay, Cawnpore, Magpur, Sholapur and Indore. This is for the coarse cloth that is generally sold throughout India and also in Afghanistan, Baluchistan, Persia, Arabia, and Africa. The majority of the other colors used are direct cotton colors of moderate or fair fastness qualities. There is a growing tendency, however, toward fast colors, particularly for dhotie borders and shirtings, where vat colors are in demand. This is particularly true in Ahmedabad, Bangalore, and Madura, and, to a certain extent, in Cawnpore.

The Market Range

The dyeing machinery in many of the Indian mills is antiquated, and wholly satisfactory results are not always obtainable. Some of the more progressive mills are installing modern dyeing equipment, and the results have proved satisfactory in every way.

German manufacturers are able to offer the Indian market a complete range of colors. No manufacturer of any other country is able to do this at present. American manufacturers offer a wide range, with the exception of anpthol, a developed color patented by Chemische Fabrik Griesheim-Elektron, Frankfort on the Main, Germany, and certain other specialized colors which, however, do not command an extended market in India. Vat colors manufactured in the United States are not being offered in large quantities in India, owing to the fact that the American demand is sufficiently large to absorb the present production, and also because the price of vat colors offered by the Swiss, British, and German is very low. American manufacturers have not, heretofore, endeavored to sell alizarin dyes in the Indian market, but since the beginning of the year they have been offered.

Swiss manufacturers are able to present quite a wide range of colors, with the exception of sulphur black, but their naphthol colors are not as satisfactory as the German. They participate in the alizarin trade only to a limited extent. British manufacturers are not offering a very wide range of colors in the Indian market, and while they manufacture almost all the types, they are not inclined to accept the prices obtainable in the country at the present time. This is true of sulphur black in particular and to a lesser degree to congo and vat colors. French and Belgian dye imports are not regular, and their range of colors is not very wide. Japanese imports are confined to one color, methyl violet, and even this has not been imported to any extent recently.

At present the bulk of the sulphur black business is being absorbed by the German manufacturers, but until the middle of last year the American manufacturers figured very largely in the trade and during the first part of last year (1927) and part of 1926 they took at least 50 percent of this business, if not more. In congo red the American manufacturers get at least 50 percent of the business. In all other colors the market is divided and the participation in the dye trade may be said to be about as shown by the imports.

Condition of Trade

The general condition of the dyestuff trade in India is unsatisfactory, and dealers feel it should of necessity be reorganized in the near future. The severe competition in prices in the past several years has had the effect of driving prices on bulk colors to a level where, it is stated, that the manufacturers cannot obtain a reasonable profit, and if present conditions continue some manufacturers will either have to withdraw from the field or amalgamate. Their bazar system of doing business is inefficient, and the liberal commissions allowed have a very unsatisfactory effect on retail prices.

American dye manufacturers have had to meet stiff competition from the Germans. When the past experience of the Germans in the Indian market is considered and the fact that their labels were well known in every bazar, American progress in India is noteworthy. It appears that the Germans are prepared to cut prices until all serious competition is removed. Whether the American manufacturers will permit themselves to be driven from the Indian dye market is doubtful, but it is unfortunate that in their contest against the Germans they are constantly competing with each other, and it would be to their benefit to have a better understanding among themselves.

From time to time small Indian merchants obtain dyes through jobbers in New York, which are placed in the bazar trade. These dyes are usually inferior in quality, and while they represent only a small portion of the trade, they have the effect of unsetting prices for a time in particular districts.

Following the report of the Tariff Board and the efforts put forward by the mill owners to secure some form of protection for the cotton textile industry, after the government of India had refused to accept the board's recommendations, a special concession was granted by the removal of duty on mill stores, which included dyes. While this gave a small measure of relief to the mill owners, it has not affected to any extent the importation of dyestuffs.

A new agreement, replacing in the United Kingdom, Germany, Spain, and Switzerland the Madrid agreement signed in 1891 and revised at Washington in 1911, provides that all goods bearing a false indication of origin shall be seized upon importation. The new agreement provides for penalties for false indication of origin and that seizure shall be made by the customs authorities. The Madrid agreement did not specifically provide for such seizure or penalties.

Cottonseed Oil CAKE MEAL

Refined Oil Futures Advance with Cotton and Lard —Crop News Less Favorable—Crude Firmer with Offerings Light

The trend of refined cottonseed oil futures in the local market was again upward last week, new high prices being established for the present movement, and crude oil was also stronger in the South, sales being reported at higher prices. Offerings in Southern markets were light. Crop accounts were less favorable and there was a fear in some quarters that the monthly government report might make a bullish showing.

The total transactions in refined oil futures on the New York Produce Exchange for four business days of the week, the exchange being closed on Monday, a legal holiday, were 75,100 barrels. Final quotations showed an advance of about $1.75 to $3.50 per barrel. Cotton futures were firmer, October closing on Friday at 19.15c., December 19c. and January 18.93c.

Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Cottonseed, Cake, Meal

Southern markets were generally quiet, though a fair demand for meal was reported in some sections. Many buyers were apparently inclined to hold off, however, for an increase in the movement of seed. There was also a disposition in some quarters to await the monthly government crop report. Crop accounts from private sources cut both ways. Weather conditions in many sections were more favorable, but there were still complaints about the backwardness of the plant.

There was little old crop product available and quotations on new crop covered a wide range, according to locality, with the offerings generally light. Quotations on seeds in the Southwest were $32 to $35 per ton, and on 43 percent cake and meal $36 to $40 per ton. In the Southwest meal was nominal at $45 to $47 per ton for 7 percent.

Cottonseed Oil

Trading in refined oil futures in the local market was quiet last week, but the trend of prices was upward much of the time, new high levels being established for the present movement. Sentiment in some quarters, for the time being at least, was more friendly to the market. This was apparently due largely to unfavorable reports regarding the progress of the cotton crop and a rise in cotton prices. Also, there was a fear in some quarters that the government crop report for September might make a bullish showing.

Moreover, the trend of lard futures in the West was upward, the movement of live hogs at many points in the West was small or moderate and advances occurred in some competing products with an increase noted in trade though many consumers were still disposed to adhere to a conservative course in making purchases.

There were frequent rains in parts of the belt where fair weather is wanted for the cotton crop. Reports that weevils were increasingly destructive were numerous. The weekly government weather and crop report was less favorable than had been expected. It stated that weather conditions for the week were in general rather unfavorable for cotton as further rains in the eastern portion of the belt and in some Gulf sections were detrimental and rainfall was insufficient to relieve drought in parts of Texas. In the Carolinas progress was mostly fair, but there were increasing reports of shedding while cloudy, wet weather favored increase of weevil activity.

In Georgia progress was very irregular, mostly good in the North and in scattered localities elsewhere, but crops deteriorated where there was too much rain. Continued shedding of young bolls was noted. Warm, dry weather is generally badly needed. In Tennessee progress was fair to very good, with plants fruiting well, but with some shedding.

In Alabama and Mississippi advance was poor to only fair with considerable shedding, reports of rotting bolls and conditions favorable for weevil. Frequent rains were unfavorable in Louisiana. In Arkansas progress was mostly good in the North, but in Central and Southern portions ranged from deterioration to only fair. In Oklahoma cotton is badly spotted.

Offerings of crude oil in the South were generally light with prices firmer. Some attributed this to the lateness of the crop. Sales of tallow were reported at an advance. Corn oil also was lighter. Stocks of lard at Chicago decreased nearly 11,000,000 pounds during the last half of August and the total on September 1 was about 12,800,000 pounds smaller than on August 1. Refiners and commission houses bought October and later months. Shorts covered the list. Offerings of contracts were noticeably light much of the time.

On the advance some who bought early in the week liquidated, fearing a surprise of a bearish character in the monthly government report. Setbacks occurred at times in cotton and lard. Trade in lard compound was rather quiet. Tallow was easier at the weekly auction in London. The weight of the hogs received in Western markets has latterly increased. The average weight of the hogs received at Chicago during the week ended September 1 was 260 pounds, against 258 pounds in the previous week, and 253 pounds in the week before that. Although stocks of lard at Chicago have decreased recently they were about 10,500,000 pounds larger on September 1 than on the same date last year. Stocks of refined lard at Liverpool, September 1, were about 1,000 tons larger than a year ago.

Final quotations on Friday showed an advance of 46 to 84 points, as compared with the closing quotations of the previous Friday, with near months showing the greatest strength.

Following is a record of the market for the week:—

Monday, September 3, 1928

Holiday.

Tuesday, September 4, 1928

	Cents per lb. in bbls. High.	Low.	Close.	Sales Bbls.
September	...	...	9.65¾ 9.90	...
October	9.87	9.75	9.86@ 9.85	3,100
November	...	...	9.85@ 9.95	...
December	9.88	9.82	9.85@——	1,300
January	9.97	9.95	9.92@ 9.95	800
February	...	...	9.92@10.10	...
March	10.10	10.09	10.05@10.10	900
April	...	...	10.05@10.20	...
Total sales				6,100

Spot (prime summer yellow)—9.60@10.00.
Crude—Nominal; no trading.

Wednesday, September 5, 1928

	Cents per lb. in bbls. High.	Low.	Close.	Sales Bbls.
September	...	...	9.85@10.00	...
October	10.02	9.94	10.02@10.05	6,400
November	...	...	10.00@10.10	...
December	10.03	9.95	10.03@10.02	3,100
January	10.08	9.96	10.09@10.15	2,400
February	...	...	10.10@10.20	...
March	10.25	10.17	10.25@——	900
April	10.25	10.25	10.25@——	100
Total sales				12,900

Spot (prime summer yellow)—9.60@10.25.
Crude—Nominal; no trading.

Thursday, September 6, 1928

	Cents per lb. in bbls. High.	Low.	Close.	Sales Bbls.
September	10.40	10.00	10.40@——	600
October	10.35	10.06	10.35@10.39	3,800
November	...	...	10.27@10.45	...
December	10.26	10.04	10.25@10.26	3,900
January	10.20	10.12	10.29@10.35	2,700
February	...	...	10.30@10.45	...
March	10.45	10.25	10.42@10.45	1,700
April	...	...	10.48@10.60	...
Total sales				17,300

Spot (prime summer yellow)—10.25@10.50.
Crude—Nominal; no trading.

Friday, September 7, 1928

	Cents per lb. in bbls. High.	Low.	Close.	Sales Bbls.
September	...	...	10.30@10.50	...
October	10.47	10.35	10.35@10.36	8,300
November	...	...	10.23@10.40	...
December	10.40	10.26	10.28@10.27	8,500
January	10.45	10.29	10.31@——	10,200
February	...	...	10.30@10.40	...
March	10.57	10.41	10.42@10.41	3,800
April	...	...	10.42@10.52	...
Total sales				*38,800

Spot (prime summer yellow)—10.25@10.75.
Crude (immediate Southeast)—8.50.
Valley—8.75.
Texas—8.50.

* Includes 8,000 switches.

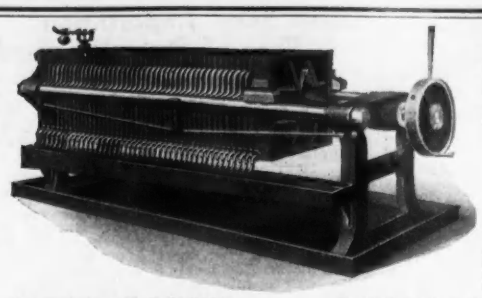
Saturday cottonseed prices will be found on page 2.

Chicago Cottonseed Oil

CHICAGO, Sept. 7, 1928.

There was a better tone as to price and buying in the crude cottonseed oil market here at the middle of the week, and the price structure displayed more confidence. Buying was fairly brisk. Texas prime crude was last sold at 8c. and sellers raised asking prices as high as 8½c. Valley and Southeastern crude was quoted at 8¼c.; Prime yellow bleachable oil strengthened to 9½c. to 9⅝c., up ½c. or more for the week. Good off-summer yellow fig oil was ruling at 9⅜c., up ½c. Refined edible cottonseed oil was only slightly affected by the improvement in the crude market. Ruling

Valuable information on Imports and Exports of Oils and Oil Materials is given in port lists beginning on page 5.



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prices were:—Barrels, car lots, 10⅝c. to 10⅞c.; barrels, less than car lots, 10⅞c. to 11⅛c.

Hull Cottonseed Oil Prices

Quotations on cottonseed oil in barrels in Hull, England, last week were:—

	Refined, per cwt. s.	d.	Egyptian crude, per cwt. s.	d.
Saturday	33	6	30	0
Monday	..	..	..	..
Tuesday	33	9	30	0
Wednesday	33	9	30	3
Thursday	33	9	30	0
Friday	33	9	30	0

Atlanta Cottonseed Products

ATLANTA, Sept. 6, 1928.

The spot market is very quiet. Interest turns to the future market, October quotations are, of course, indicative of the new crop prices. Seven percent meal is now quoted at mill points at $33 per ton. This is looked upon as low enough to interest the fertilizer trade. Inquiries from that source are reported. Another rainy season has prevailed in the southeast during the week causing, it is thought, some deterioration of the crop especially where boll wevill are abundant.

The quotations of this market are as follows:—

OIL—Prime crude, 7½c. to 8c. per pound.

MEAL—7 percent meal, $46 per ton spot; October, $33 per ton, mills.

HULLS—$12 to $13 per ton, loose.

LINTERS—Grade No. 2, 7½c. to 8c. per pound; No. 5, 5c. per pound; No. 6, 4c. to 4½c. per pound.

New Orleans Cottonseed

NEW ORLEANS, Sept. 5, 1928.

The market for cottonseed products was steady. The inquiry for crude and refined oil was somewhat better, but offerings were still light. Crop news was conflicting, but many reports were favorable. Prime crude oil, 8c. per pound, f.o.b. New Orleans; prime summer yellow, 9½c. per pound; soap stock, 50 percent, A.A.F., loose, 2c. per pound; cake, 8 percent ammonia, $38, nominal, per ton; meal, 8 percent ammonia, $47.50, nominal, per ton; hulls, $12 per ton.

Dallas Cottonseed Products

DALLAS, Sept. 7, 1928.

Prime cottonseed, delivered Dallas, is $33 per ton; prime crude oil, 8½c. per pound; 43-percent cake and meal, f.o.b. Dallas, $37 per ton; hulls, $6 per ton; mill-run linters, 4c. to 5c. per pound. The weather is cool.

Memphis Cottonseed Products

MEMPHIS, Sept. 7, 1928.

The crude cottonseed oil market has advanced steadily throughout the week, values being adjusted to reduced crop ideas. Mills are starting two to three weeks later than usual. Sales prices are:—September, 8½c. per pound; immediate, 8¾c., 9c. now asked. Meal has been advanced $1 in the past few days, Memphis price now being $38 per ton for 41-percent protein. Seed prices have been advanced $2 this week, $38 per ton, Delta basis, being bid now.

Cook, Swan & Young Co. Receiver Made Permanent

In a decision rendered last week by Vice-Chancellor Fallon, sitting in the Court of Chancery, New Jersey, Jersey City, Frank C. Ferguson and Walter C. Russ, who were recently appointed temporary receivers for the Cook, Swan & Young Corporation, dealer in fish oils and vegetable oils, this city, were ordered to be continued as receivers with full authority to take possession of the company's property of every description and to settle with any debtor or creditor on terms beneficial to the company. The decision applies to the company's properties in New York, New Jersey, and Massachusetts, and directs the receivers to file a report within thirty days with recommendations respecting the further continuance of the business of the company and the administration of the assets thereof.

Henry C. Zwing, cottonseed oil broker, this city, has been elected to associate membership in the New York Produce Exchange.

E. H. Laing, vegetable oil broker, this city, returned September 5 from his country place at East Wolfeboro, N. H., where he had spent two weeks fishing and golfing.

F. Walter E. Martin, of Aspegren & Co., cottonseed oil broker, this city, has been elected an associate member of the New York Produce Exchange.

The export duty on cottonseed from the Department of Loreto, Peru, has been reduced from 1 sol to 0.25 sol per gross quintal.

Glass Sand Importation Free of Duty Enjoined

WASHINGTON, Sept. 6, 1928.

A temporary injunction restraining the Bureau of Customs from permitting the free importation of Belgian sand has been issued by Justice William Hitz of the Supreme Court of the District of Columbia. Hearing is set for September 20.

Belgian sand is used principally by glassmakers on the Pacific Coast. Holding that this product is commonly known in the trade as silica, the Bureau of Customs ruled that it is dutiable at $4 per ton as Silica instead of being duty-free as sand. Importers protested that this was a mistake. After an investigation and with the approval of the solicitor of the Department of the Treasury, the bureau attempted to withdraw its earlier decision.

In securing the injunction, domestic producers of sand pointed to the provision in the revenue laws that the Department of the Treasury cannot reverse a decision when the reversal would have an adverse effect on the revenues of the country without the approval of the Attorney-General, and they declare that the solicitor of the department, although an assistant of the Attorney-General, has not the power to give approval.

Boston Paint Golfers Play at Lowell Club

The Boston Paint and Oil Golf Club had a tournament at the Vesper Country Club, Lowell, September 5. The competition was on a net medal basis. J. E. Mahoney won the first prize; C. H. Lawrence, the second. Dinner was served at the clubhouse after the games.

Net scores of the contestants were as follows:—J. E. Mahoney, 97; C. H. Lawrence, 98; H. D. Carter, 98; C. P. Seaverns, 98; C. M. Cobb, 100; W. L. Holter, 101; J. E. Hughes, 102; F. N. Eisenman, 105; D. W. Wade, 106; J. E. Maroney, 120.

Clay Sales in 1927

The quantity of clay sold by producers in the United States in 1927 amounted to 3,849,176 short tons, valued at $13,697,159, according to the United States Bureau of Mines. These figures show a decrease of 3 percent in quantity and decrease of 1 percent with 1926. They represent only clay sold as clay or mined under royalty and do not include the much greater quantity of clay that was burned into clay products by the producers themselves from their own property. The leading five States in the order of the quantity of clay sold were Pennsylvania with 23.3 percent of the total quantity, Missouri with 10.8 percent, Ohio with 8.4 percent, New Jersey with 8.1 percent, and California with 7.5 percent. The data were collected direct from producers in 43 states and in co-operation with the State Geological Surveys of Alabama, Florida, Georgia, Illinois, Iowa, Maryland, Michigan, Missouri, New Jersey, New York, North Carolina, Texas, Virginia, Washington and Wisconsin.

The sales of kaolin, the clay that is used in making high-grade pottery and porcelain, as well as paper, oilcloth, and other products, and which is generally considered the highest grade of clay, amounted to 454,245 tons, valued at $3,809,834, an increase of 5 percent in quantity and 1 percent in vlaue as compared with 1926. The clay of largest quantity and value is fire clay. The sales of fire clay in 1927 were 2,699,761 tons. This was 4 percent less than those of 1926, the year of largest sales. The value of the fire clay sold in 1927 was $7,719,725, a decrease of 5 percent as compared with 1926.

The imports and exports of clay decreased in quantity and value in 1927 as compared with 1926. The imports of clay amounted to 394,500 short tons, valued at $3,448,970, a decrease of 19 percent in quantity and value. Kaolin, or china clay, constituted 86 percent of the total imports in 1927. Experts of clay in 1927 amounted to 99,384 tons, valued at $1,117,889, an increase of 11 percent in quantity and 13 percent in value as compared with 1926. Exports of fire clay amounted to 48 percent of the total.

Clay Sold by Producers

	1926 Short tons.	1926 Value.	1927 Short tons.	1927 Value.
Kaolin	432,215	$3,771,568	454,245	$3,809,834
Ball clay	112,195	867,500	119,763	913,976
Slip clay	8,644	45,959	6,137	32,264
Fire clay	2,819,346	8,119,323	2,699,761	7,719,725
Stoneware clay	84,002	185,288	98,355	203,648
Miscellaneous clay	510,796	1,115,951	470,915	1,017,712
Totals	3,967,198	14,105,589	3,849,176	13,697,159

Chemical Imports in June

(Continued from page 28)

Other Chemicals (Dutiable)

	Unit.	Quantity.	Value.
Phosphorus	lb.	35,284	11,860
Saccharides; adonite arabinose, dulcite, galactose, inosite, inulin, levulose, mannite d-talose, d-tagatose, ribose, melibiose, dextrose testing above 99.7%, mannose, melezitose, raffinose, rhamnose, sorbite, xylose, and saccharida, n.s.p.f.	lb.	89,650	9,916
Strontium carbonate, precipitated	lb.	3,331	175
nitrate	lb.	150,120	8,008
Terpinhydrate	lb.	4,462	1,089
Tetrachlorethane	lb.	4,160	188
Trichlorethylene	lb.	11,023	713
Thorium nitrate	lb.	1,302	1,800
Titanium, potassium oxalate and compounds and mixtures containing titanium	lb.	1,650	330
Urea	lb.	54,081	2,936
Zinc chloride	lb.	147,686	5,769
sulphate	lb.	110,547	2,538
sulphide	lb.	7,230	1,426
Chemical elements, compounds, mixtures, and salts, n.s.p.f., not containing alcohol	lb.	575,626	68,402
Chemicals, drugs, and similar substances, in capsules, pills, tablets, etc., ordinary duty less than 25%	lb.	11	16
Compounds, mixtures, and salts of bismuth	lb.	479	1,363
Compounds, mixtures, and salts, of which gold, platinum, rhodium, or silver are chief value	lb.	582	2,565

Fertilizer and Fertilizer Materials (Free List)

Calcium cyanide or lime nitrogen	ton	6,131	190,019
nitrate (nitrate of lime)	ton	2,520	97,337
Nitrate of soda	ton	76,135	2,911,419
Ammonium-sulphate-nitrate (leuna saltpeter)	ton	46	2,853
Guano	ton	1,625	90,947
Dried blood	ton	898	62,347
Tankage	ton	1,908	71,950
Nitrogenous material, n.s.p.f. (including fish scrap, hoof meal, castor-bean pomace)	ton	2,090	51,074
Bone phosphates (bone ash, bone dust, bone meal) and animal carbon for fertilizer	ton	5,115	150,789
Phosphate rock, crude	ton	2,861	34,420
Basic phosphate slag	ton	95	1,458
Muriate of potash	ton	8,108	301,530
Sulphate of potash, crude	ton	538	23,850
Kainite	ton	888	9,585
Manure salts, double manure salts, and hard salts	ton	6,008	80,754
Ashes, wood, and beet root	ton	23	178
Prepared fertilizer mixtures	ton	8	962
Limestone ground and pulverized, for agricultural purposes	ton	6,820	6,895
Substances used only for manure, n.s.p.f.	ton	4,152	138,472

Fertilizers (Dutiable)

Sulphate of ammonia	ton	231	11,527

Perfume Materials (Free List)

Enfleurage grease	lb.	1	102
Floral essences and concretes	lb.	333	30,758

Toilet Preparations (Dutiable)

Perfumery, including cologne containing alcohol	lb.	8,114	59,942
not containing alcohol	lb.	14,835	15,610
Toilet waters containing alcohol	lb.	60	86
not containing alcohol	lb.	635	295
Floral and flower waters, containing no alcohol, n.s.p.f.	gal.	2,178	2,542
Anethol, citral, geraniel, heliotropine, ionone, rhodinol, safrol, terpineol	lb.	21,037	11,682
Ambergris	lb.	9	1,402
Civet	oz.	715	1,749
Musk in grain or pods	lb.	67	26,508
All natural or synthetic odoriferous or aromatic chemicals, n.s.p.f.	lb.	12,012	25,280
All mixtures containing essential or distilled oils, or natural or synthetic odoriferous or aromatic substances	lb.	12,066	87,911
Musk, artificial, benzyl acetate, benzyl benzoate, coumarin, diphenyloxide methyl anthranilate, methyl salicylate, natural methyl salicylate or oil of wintergreen or oil of sweet birch, phenylacetaldehyde, phenylethyl alcohol and other synthetic odoriferous or aromatic chemicals not containing alcohol	lb.	11,210	63,477
Cosmetics and toilet preparations, dentifrices, hair tonics, face powders, rouges, paints, pomades, and creams not containing alcohol	lb.	98,069	41,386
containing alcohol	lb.	5,962	16,220

Alcohol (Dutiable)

Amyl alcohol	lb.	720	224
Fusel oil	lb.	763	344
Propyl alcohol	lb.	10	9

Pigments, Paints and Varnishes (Dutiable)

	Unit.	Quantity.	Value.
Iron oxide and iron-hydroxide pigments	lb.	1,913,788	48,525
Ochers, crude, not ground	lb.	40,320	899
Siennas, crude, not ground	lb.	86,170	1,947
Ocher and sienna, washed or ground	lb.	2,094,237	36,362
Brown, vandyke, cassel earth or cassel brown	lb.	126,292	2,442
Barytes ore, crude	ton	1,343	4,126
ground or manufactured	ton	138	1,619
Umbers, crude, not ground	lb.	520,404	3,407
washed or ground	lb.	124,474	2,911
Whiting, or Paris white, dry, ground, bolted	ton	2,246	11,706
ground in oil (putty)	lb.	15,940	402
Zinc oxide and leaded zinc oxides, containing not more than 25% lead, dry powder	lb.	222,100	17,201
ground in or mixed with oil or water	lb.	1,125	136
Lithopone and other combinations of zinc sulphide and barium sulphate	lb.	935,499	36,893
Lamp black	lb.	69,526	4,653
Black pigments, n.s.p.f.	lb.	178,632	3,845
Blue pigments (ferrocyanide and ferricyanide blues, Prussian blue, Chinese blue, Berlin blue)	lb.	2,200	597
Ultramarine, wash blue, and all blues containing ultramarine	lb.	103,497	12,088
Red lead	lb.	1,700	104
Lead pigments, n.s.p.f.	lb.	4,141	230
Blanc fixe or precipitated barium sulphate	lb.	572,091	13,104
Chrome yellow, green, and other chromium colors	lb.	19,601	4,500
Vermilion reds (containing quicksilver)	lb.	3,997	5,314
Artists' colors, n.s.p.f., not assembled in sets, kits, etc.	lb.	22,522	22,301
assembled in paint sets, kits, etc.	lb.	10,852	2,301
Enamel paints	lb.	26,584	5,624
Ceramic and glass smalts, frostings, glazes, fluxes, enamels, and colors—ground or pulverized	lb.	58,023	12,780
any other form	lb.	4,849	1,286
Paints, colors, pigments, and stains, n.s.p.f.	lb.	55,467	12,111
Spirit varnishes containing 5% or more methyl alcohol	gal.	27	140
Varnishes, n.s.p.f., including gold size or japan	gal.	1,632	2,466

Miscellaneous

Pyroxylin products, n.e.s., in blocks, sheets, etc.	lb.	12,655	16,927
Marine glue pitch	lb.	32,396	2,453

Petroleum Freights to Be Discussed September 15

WASHINGTON, Sept. 6, 1928.

A preliminary conference of all parties interested in the revision of freight rates on refined petroleum products in the Southwest will be held in the Jefferson Hotel, St. Louis, Mo., September 15, at 9 a. m., the Interstate Commerce Commission announced today.

A proposal that such a conference be held was made by the commission July 11, when it combined a large group of individual rate complaints into part 4-A of Docket 17,000, the general investigation of freight rates being made under the Hoch-Smith resolution. Representatives of the I. C. C., shippers, carriers, and State commissions will be present at the conference to discuss places and dates for hearings and plans for the presentation of evidence without duplication. Some of the questions suggested for discussion are the inclusion of intrastate rates in Kansas and Texas; the exclusion of consideration of rates on products other than gasoline and refined products taking the same rates; mileage scales; joint line rates; fourth section relief, and similar matters.

Wisconsin Taxes Gasoline Despite Testing by Buyer

MADISON, Wis., Sept. 4, 1928.

The State Attorney-General has overruled contention of the Allis-Chalmers Company that the latter was not liable for payment of money for gasoline inspection fees and for fees on other products. The company had contended that, since it was more exacting in its own laboratory tests of the products it bought than the requirements of the State, carlot inspection of its oil products by the State was unnecessary and an unjust expense upon it. The company also asserted that the inspection law was intended for the protection of the individual buyer of gasoline at retail, who was without facilities for testing the products. It is possible that the question may be taken into the courts.

The Producers & Refiners Corporation has acquired in northwestern Wyoming the South Frannie structure, near a recently proved area.

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SOAP MAKING, FAT HARDENING,
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SAPONIFIED RED OIL
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The World's Largest Manufacturers of Stearic and Oleic Acids

Miscellaneous Oils

Further Advance in Tallow—Stearic Acid Again Raised by Makers—Crude Menhaden Oil Higher—Chinawood Firmer

The market for miscellaneous oils, fats and greases was more active last week though the improvement in business was by no means pronounced. Many consumers were still disposed to adhere to a conservative course in making purchases. Orders for small or moderate quantities of various commodities were received in an increased volume, however, and the general market had a better tone, the trend of prices being upward.

Chinawood oil was firmer, higher prices prevailing here and on the Pacific Coast. Some improvement was noted in the demand, though no sales of importance were reported. Offerings from abroad were light with the primary market firm.

Changes in coconut oil were small, the tone of the markets here and on the coast at the close of the week being steady. Business was of a conservative character, a somewhat better inquiry being noted for moderate quantities. Far Eastern markets for copra and coconut oil were steady with offerings light.

Slightly higher prices were demanded for palm oil on spot, supplies being small while the request was fairly active. Rapeseed oil was easier on spot, competition among sellers being somewhat keener. Shipments of seed from India to the United Kingdom and the Continent from January 1 to August 15 were about 11,000 tons larger than in the same time last year.

Among the animal products, tallow was higher. Offerings from producers were light. There was a better demand. At the weekly auction in London sales were small and the market was slightly easier. Changes in cash lard were narrow. Domestic trade was somewhat more active and a fair export inquiry was noted. The movement of live hogs in the West was light. American lard in Liverpool was irregular.

Stearic acid met with a good demand and the market was firmer, prices being advanced further by makers. Higher prices were demanded for oleo stearin. Grease was firm though quiet. Fish products were generally steady or firm. Weather conditions were unfavorable for menhaden fishing.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
Chinawood oil, spot, bbls. or drums, ½c. per lb.	Coconut oil, spot, tanks, ⅛c. per lb.
arrival at New York, ½c. per lb.	Rapeseed oil, refined, spot, 2c. per gal.
Pacific Coast, tanks, prompt shipment, ½c. per lb.	Soya bean oil, crude, coast, ⅛c. per lb.
Pacific Coast, futures, ⅛c. per lb.	
Corn oil, crude, mills, ¼c. per lb.	
Grease, house, ⅛c. per lb.	
yellow, ⅛c. per lb.	
Lard, middle Western, 15c. per 100 lbs.	
prime Western, 20c. per 100 lbs.	
Menhaden oil, crude, 1c. per gal.	
Olive oil foots, spot, ⅛c. per lb.	
Palm oil, spot, Lagos, ⅛c. per lb.	
Niger, ⅛c. per lb.	
Stearic acid, double pressed, ¾c. per lb.	
triple pressed, 1c. per lb.	
Stearin, oleo, ⅛c. per lb.	
Tallow, edible, ⅛c. per lb.	
extra, ⅛c. per lb.	
special, ⅛c. per lb.	

Comparative Values

Index numbers compiled from twenty-three typical oils, fats and greases on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
139.2	136.5	135.0	148.1

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Vegetable Oils

Chinawood.—A firmer tone developed in domestic markets last week, the trend of prices being upward here and on the coast, though changes for the week were not very wide. The inquiry was somewhat more active and offerings were lighter in all positions. The primary market was firm with prices there above a parity with those prevailing in this country. On the coast sales were reported at an advance of ⅜c. per pound in tank cars. Offerings from abroad continued light. San Francisco reported arrivals of 644 long tons and 450 drums from Chinese ports.

Coconut.—Changes in prices in domestic markets last week were narrow, the prevailing tone being steady at the close. Business showed a slight improvement. Consumers were not inclined to purchase ahead to any extent but orders for moderate quantities were received in some quarters in an increased volume. Sales were noted here at 8⅛c. per pound for prompt shipment in tank cars while on the coast 7¾c. per pound appeared to be an inside quotation. Offerings in the latter market for future shipment were light. There were no new developments in the Far Eastern market for copra or oil. Exports of cocnut oil from Manila to the United States during July were 13,642,000 kilos.

Corn.—Crude was higher in the west. Demand was light, consumers being disposed to hold off for further developments in competing oil. Offerings from producers were generally limited.

Olive.—Foots met with a somewhat better inquiry. Spot supplies are small and offerings for arrival continued light. The market was firm. Denatured oil was quiet but in the absence of any increase in offerings the market remained steady. Trade in edible oil was routine.

Palm.—A fairly active inquiry was reported and the market was firm. Spot supplies are small and slightly higher prices were demanded. There were offerings for September-October shipment from the West Coast at 7¾c. per pound for Lagos and 7¼c. to 7⅜c. for Niger. Palm kernel oil was quiet and steady.

Rapeseed.—The market had an easier tone, offerings of spot product being somewhat freer and at small concessions although the primary situation was steady. There was a fair demand on spot and for arrival. Shipments of seed from India to the United Kingdom and the Continent from January 1 to August 15 were 70,875 tons against 59,275 tons in the same time last year.

Soya Bean.—Crude was quiet on the coast, consumers being disposed to hold off owing to the easy position of competing product. Quotations were nominal.

Current prices on oils, fats, and greases, formerly printed on page 3, are now printed at the end of this market report.

Exports of Oil Cake and Meal

Exports from New York last week were:—

	Pounds	
	Oil cake.	Oil meal.
Friday	.....	.....
Saturday	397,760	.....
Monday	.....	.....
Tuesday	1,175,100	.....
Wednesday	2,785,800	.....
Thursday	191,700	.....
Totals	4,550,360	.....
Since January 1—		
This year	259,318,760	2,559,952
Last year	220,155,402	5,057,000

Chicago Vegetable Oils

CHICAGO, Sept. 7, 1928.

Coconut oil has been more active in the Chicago market the last few days, with numerous good sized orders and 5 to 10 car buyers not infrequent. The week has seen, however, little change in price on this product in any grade. While prices on corn oil were little changed, there was some indication that sellers were trying to get more money for it. There was little change in the prices on the other oils with merely a fair demand, except that crude peanut oil seemed stronger.

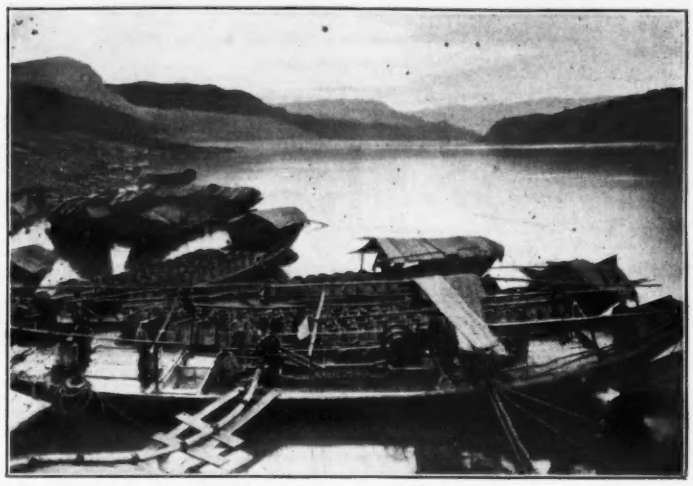
Ruling quotations per pound were:—

COCONUT (sellers' tanks)—September-December shipment, 7¾c., more offered at 7¾c. to 7⅞c.; acidulated oil, 7c. to 7¼c.; edible,

(Continued on page 74)

Valuable information on Imports and Exports of Oils and Oil Materials is given in port lists beginning on page 5.

A Modern Touch in Ancient China



A modern efficient gasoline engine mounted on a venerable river junk speeds up the handling of Werner G. Smith Co. Wood Oil at Wanhsien, 600 miles inland from Hankow. From this point on, junks and baskets are eliminated and W. G. S. Co. Oil travels in tank steamers.

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If you sell Opaline, you ask a motorist his mileage—then you consult the Sinclair Recommendation Index and give him the correct grade—and that grade will seal his pistons and *prevent power from blowing by!*

That's the *extra* service Opaline gives—that's the *extra* value an Authorized Opaline Dealer gives a motorist for his money. This Opaline method of applying motor oil is an exclusive one—a sure one for increasing business, by selling precision in lubrication. May we tell you the added advantage of selling such a favorably known, nationally advertised brand?

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Also Makers of Sinclair Gasoline and H-C Gasoline

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Crude Production Again Above 2,500,000-Barrel Mark—Gasoline Lower in Midcontinent —July Consumption Set Record

Further increases in crude petroleum output, together with lower prices for gasoline in the Midcontinent area, featured the oil market last week. The steadily mounting production of crude was caused principally by new completions in West Texas, and further development of the new St. Louis pool, producing light oil, in Oklahoma.

With the season of peak consumption of motor gasoline about at an end, refiners in the Southwest were reported planning to reduce their runs, rather than add to their gasoline storage. Runs to stills for the country as a whole in July reached a new high level, when the daily average crude throughout was 2,603,000 barrels. The major portion of the increase was in domestic crude. The effect of the heavy refinery runs was reflected in a net decline of 1,508,000 barrels in crude stocks east of California during July, practically all of this decline being recorded in stocks of light crude held in Oklahoma. The weakness in refinery gasoline, which developed in Oklahoma at the close of August, was accentuated by further general reductions last week. Thus far, markets in the East have not been affected by the declines vanced 10c. a barrel on September 1.

leum output went above the 2,500,000 barrel mark during the week ending September 1, when average production of 2,503,250 barrels was reported by the A. P. I. Substantial increases were shown in output of West Texas and Oklahoma fields, with little material alteration in producing schedules shown by the other important producing areas. Kentucky crude in the Stoll lines at Oil City, Ky., was ad-

According to reports received by the Bureau of Mines, Department of Commerce, from companies which operate gathering lines, the production of crude petroleum in the United States during July, 1928, amounted to 75,426,000 barrels. This represents a daily average of 2,433,100 barrels, an increase over the daily average output in June of 15,500 barrels. The majority of the states, including the important producing areas of California and Oklahoma, reported decreased output in July but these declines were more than overbalanced by the West Texas district where the daily average output increased approximately 50,000 barrels. The various fields of the West Texas district produced an average of 365,000 barrels per day in July, as compared with 262,000 barrels per day for the Seminole district.

The slow decline in crude stocks east of California was continued in July, when the total was reduced from 370,751,000 to 369,243,000 barrels, a net withdrawal of 1,508,000 barrels. Practically all of this decline was recorded in stocks of light crude held in Oklahoma.

Total stocks of all oils declined approximately 1,100,000 barrels as compared with a decrease of approximately 500,000 barrels in June. In spite of the continued heavy withdrawals from gasoline storage, total stocks of all refined oils showed a small gain in July. This resulted almost entirely from the increase in fuel oil stocks, a large part of which was diverted to unfinished oil stocks, presumably for use as cracking stock.

Current prices on petroleum products, formerly printed on page 3, are now printed at the end of this market report.

The State of the Petroleum Market

Crude petroleum prices were unchanged last week in principal fields. Gasoline at refineries was again lower. Service station prices for gasoline showed no general changes. Comparative details follow:—

	Sept. 7	Aug. 31	Last Year
Crude petroleum prices at well (average for ten fields), per gallon.....	$1.584	$1.584	$1.417
Gasoline price at refinery (average at four refining centers), per gallon.....	.1072	.1081	.0791
Gasoline prices at service station (average for ten States), per gallon.....	.2067	.2067	.1905

Commercial production of crude petroleum in domestic fields, as estimated by the Oil, Paint and Drug Reporter, has amounted this year, from January 1 to September 8, to 598,084,000 barrels, compared with 615,116,000 barrels in the corresponding period in 1927. Commercial production is now at the rate of 2,477,600 barrels a day, compared with 2,497,300 daily at this time last year.

in Group 3 territory, although it is expected that the local market will reflect this condition shortly unless the Midcontinent situation should firm up. The larger refiners in the Southwest have not lowered their prices, and are now quoting about a half cent over the general market.

All previous records for domestic gasoline consumption were broken in July, when daily average domestic demand passed the million-barrel-per-day mark for the first time, standing at 1,032,000 barrels daily for the month. This record consumption, accompanied by a slight increase in exports, resulted in still further depletion of refiners' stocks. At the close of the month, holdings were sufficient for 25 days' supply at the current rate of demand, against 30 days' supply on hand at the close of June and 37 days' holdings on hand at the end of July last year.

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Crude Petroleum

For the first time in ten months, domestic average daily crude petro-

Production

Domestic crude petroleum production continued on the increase during the week ended September 1, showing a gain of 25,800 barrels in average daily output to 2,503,250 barrels. This was the first time that production had gone over 2,500,000 barrels since October 8, 1927. Details of production, with comparison for the previous week and

Valuable information on Imports and Exports of Petroleum and Its Products is given in port lists beginning on page 5.

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(Fire tests 600°, 635°, 650°; High Viscosity)

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Antofagasta
*Antwerp
Aomori
*Avonmouth
*Balboa (Panama Canal)
*Balik Pappan
*Bangkok
*Barton (Manchester Ship Canal)
*Batavia
*Bergen
Boolebasi Ceram
*Bombay
Bumpyo (Korea)
*Brisbane
*Buenos Ayres
*Calcutta
Canton
*Cape Town
*Cebu
*Colombo
*Colon (Panama Canal)
*Constanza
*Copenhagen
*Curacao
*Dover
Falmouth
*Genoa
*Gibraltar
*Glasgow
*Gothenburg
*Granton
*Hamburg
Hankow
*Havana
*Havre
*Hong Kong
Honolulu
*Hull
Ichang
*Iloilo
*Iquique
*Jarrow-on-Tyne
*Karachi
*Kobe
La Guayra (Venezuela)
*Las Palmas
*Leghorn
*Lisbon
*Liverpool
*London (Shell Haven and Thames Haven)
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*Madras
*Malmo
*Malta
*Manila
Maracaibo (Venezuela)
*Marseilles
*Melbourne
*Miri
*Mombasa
*Montevideo
*Montreal
Nagasaki
*Naples
*New Orleans
*New York
*Oslo
Palembang
*Palermo
*Pangkalan Berandan
*Penang
Perim
Pernambuco
*Piraeus
Portishead
*Portland (Oregon)
*Port Said
Port Sudan
Puerto Mexico
Quebec
*Rio de Janeiro
*Rotterdam
*Rouen
Sabang
*Saigon
*St. Nazaire
*St. Vincent
Saltozaki
*San Francisco
*San Juan (Porto Rico)
*San Pedro (Los Angeles Harbour)
Santos
*Seattle (Washington)
*Shanghai
*Singapore
(Pulo Bukom)
*Singapore
(Pulo Samboe)
*Singapore
(Tanjong Pagar)
*Sourabaya
*Southampton
*Stanlow
*Stockholm
*Suez
Svolvaer
*Sydney
*Tampico
Tarakan
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Trinidad
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*Venice
Vera Cruz
*Wellington (N. Z.)
*Yokohama

* Lubricating Oils for Marine purposes are also available at these stations

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BUYERS desiring information regarding supplies of and price of **Oil Fuel** for use in Internal-combustion Engines or other purposes should apply to **The Asiatic Petroleum Co., Ltd.**, at the address below.

THE Asiatic Petroleum Company also supply **Kerosene Oil** for use in the smaller Internal-combustion Engines and are prepared to supply **Petroleum Spirits, Wax, Asphalt** and **Greases** throughout the World.

THE ASIATIC PETROLEUM COMPANY
LIMITED
St. Helen's Court, Gt. St. Helen's, London, England

the corresponding week last year, follow:—

	Daily average in barrels For week ended Sept. 1. 1928.	Aug. 25. 1928.	Sept. 3. 1927.
Oklahoma	703,800	699,050	809,950
Kansas	100,850	102,200	104,700
Panhandle Texas	63,550	62,700	98,450
North Texas	95,100	95,300	84,200
West Cent. Texas	55,750	55,300	65,950
West Texas	361,250	334,800	169,600
East Central Texas	22,550	23,000	31,150
Southwest Texas	25,550	25,450	29,850
North Louisiana	39,700	39,800	54,000
Arkansas	86,500	88,350	102,150
Coastal Texas	105,250	106,050	127,650
Coastal Louisiana	23,350	23,300	15,950
Eastern	113,000	113,500	113,500
Wyoming	57,200	57,350	49,650
Montana	9,850	9,850	14,850
Colorado	7,400	7,750	7,550
New Mexico	3,600	3,900	2,400
California	629,000	630,400	630,700
Totals	2,503,250	2,477,450	2,512,250

The estimated daily average gross production of the Mid-Continent field including Oklahoma, Kansas, Panhandle, North, West Central, West, East Central and Southwest Texas, North Louisiana and Arkansas, for the week ended September 1 was 1,554,600 barrels, as compared with 1,525,650 barrels for the preceding week, an increase of 28,950 barrels. The Mid-Continent production, excluding Smackover, Arkansas heavy oil, was 1,498,150 barrels, as compared with 1,468,950 barrels, an increase of 29,200 barrels.

Eastern Pipeline Movements

Field runs and pipeline deliveries in New York, Pennsylvania, West Virginia, Kentucky, Tennessee, Ohio and Indiana of latest record are as follows:—

Runs

	Barrels Day.	Month.
August 29 and 30	48,292	1,284,805
September 1, 2 and 3	119,374	119,374
September 4	69,822	189,196

Deliveries

	Barrels Day.	Month.
August 30 and 31	102,721	1,858,518
September 1, 2, 3 and 4	143,919	143,919
September 5	88,168	232,087

Monthly Totals, 1928

	Barrels Runs.	Deliveries.
January	1,463,163	1,551,512
February	1,243,949	1,372,114
March	1,782,134	1,709,867
April	1,374,186	1,695,911
May	1,493,922	1,877,417
June	1,482,713	1,872,768
July	1,334,834	1,743,840
August	1,858,518	1,284,805

Monthly Totals, 1927

	Barrels Runs.	Deliveries.
January	1,742,480	4,378,010
February	1,356,486	1,724,540
March	1,749,992	2,176,862
April	1,810,099	1,749,770
May	1,868,809	4,491,719
June	1,658,495	1,773,285
July	1,562,285	1,792,841
August	1,460,030	1,879,345
September	1,586,039	1,782,860
October	1,209,684	1,432,652
November	1,233,047	1,460,908
December	1,645,073	1,412,412

Imports

Imports of crude and refined petroleum for the week ended September 1 totaled 1,500,000 barrels, a daily average of 214,286 barrels, compared with 1,513,000 barrels, an average of 216,143 barrels a day, for the previous week and a daily average of 220,750 barrels for the four weeks ended September 1. Comparative details follow:—

	Barrels received Week ended Sept. 1.	Week ended Aug. 25.
At Atlantic Coast ports—		
Baltimore	226,000	168,000
Boston	146,000	145,000
New York	836,000	761,000
Philadelphia	151,000	*75,000
Others	.....	70,000
Total	1,359,000	1,219,000
Daily average	194,143	174,143
At Gulf Coast ports—		
Galveston district	.....	.....
New Orleans and Baton Rouge	141,000	275,000
Port Arthur and Sabine district	.....	.....
Tampa	.....	19,000
Total	141,000	294,000
Daily average	20,143	42,000
At all United States ports—		
Total	1,500,000	1,513,000
Daily average	214,286	216,143
Daily average four weeks ended	220,750	241,179

Movement of California Oil

California oil receipts at Atlantic and Gulf Coast ports for the week ended September 1 were 144,000 barrels, an average of 20,571 barrels daily, against 575,000 barrels, or 82,143 barrels a day for the previous week and a daily average of 65,500 barrels for the four weeks ended September 1. Comparative details follow:—

	Barrels received Week ended Sept. 1.	Week ended Aug. 25.
At Atlantic coast ports—		
Baltimore	68,000	177,000
Boston	.....	.....
New York	76,000	165,000
Philadelphia	.....	*158,000
Others	.....	75,000
Total	144,000	575,000
Daily average	20,571	82,143
At Gulf coast ports—		
Daily average	.....	.....
Total Atlantic and Gulf coast ports	144,000	575,000
Daily average	20,571	82,143
Daily average four weeks ended	65,500	82,179
Oils Received		
Gasoline	144,000	435,000
Gas oil	.....	140,000
Total	144,000	575,000

* Revised.

Price Changes in Past Month

August 8—Corning crude advanced 10c. a barrel.

August 16—California crude oil prices advanced 1c. to 59c. a barrel, as to gravity.

September 1—Crude in Stoll lines at Oil City, Ky., advanced 10c. a barrel.

Prices at Well

The following prices are those paid the corresponding period of 1927:—

Pennsylvania-Ohio-West Virginia*

	Per barrel 1928.	1927.
Cabell, W. Va.	$1.45	$1.40
Corning, Ohio	1.80	1.45
†Lima	1.60	1.71
Pennsylvania—		
In N. Y. Transit lines	3.20	2.65
Bradford oil in Natl. Transit lines	3.20	2.65
Other Pa. oil in Natl. Transit lines	3.10	2.55
In Southwest Penn lines	3.10	2.55
In Eureka lines	3.00	2.50
In Buckeye lines	2.85	2.35
Gaines, Pa.	2.25	2.25
Kelster, Pa.	1.20	1.10
†Wooster, Ohio	1.67	1.57

* Posted by Joseph Seep Purchasing Agency.
† Posted by Ohio Oil Company.

Oklahoma-Kansas-North, East and Central Texas*

		Per barrel 1928.	1927.
Midcontinent, 24 deg. and low		.60	1.05@1.12
25 deg. to 25.9 deg.		.67	1.05@1.12
26 deg. to 26.9 deg.		.74	1.05@1.12
27 deg. to 27.9 deg.	.75@	.81	1.05@1.12
28 deg. to 28.9 deg.	.75@	.88	1.05@1.14
29 deg. to 29.9 deg.	.75@	.95	1.05@1.16
30 deg. to 30.9 deg.		.90	1.02@ —
31 deg. to 31.9 deg.		1.05	1.09@ —
32 deg. to 32.9 deg.		1.16	1.05@1.22

Oklahoma-Kansas-North, East and Central Texas*—(Continued)

	Per barrel 1928.	1927.
Midcontinent (Cont'd)—		
33 deg. to 33.9 deg.	1.21	1.07@1.24
34 deg. to 34.9 deg.	1.26	1.09@1.26
35 deg. to 35.9 deg.	1.31	1.11@1.28
36 deg. to 36.9 deg.	1.36	1.13@1.30
37 deg. to 37.9 deg.	1.41	1.15@1.32
38 deg. to 38.9 deg.	1.46	1.17@1.34
39 deg. to 39.9 deg.	1.51	1.19@1.36
40 deg. to 40.9 deg.	1.56	1.21@1.38
41 deg. to 41.9 deg.	1.61	1.23@1.40
42 deg. to 42.9 deg.	1.66	1.25@1.42
43 deg. to 43.9 deg.	1.71	1.27@1.41
44 deg. to 44.9 deg.	1.76	1.29@1.46
45 deg. to 45.9 deg.	1.81	1.31@1.48
46 deg. to 46.9 deg.	1.86	1.33@1.50
47 deg. to 47.9 deg.	1.91	1.35@1.52
48 deg. to 48.9 deg.	1.96	1.37@1.54
49 deg. to 49.9 deg.	2.01	1.39@1.56
50 deg. to 50.9 deg.	2.06	1.41@1.58
51 deg. to 51.9 deg.	2.11	1.43@1.60
52 deg. and above	2.16	1.45@1.62
Corsicana	1.25	1.25

* Posted by Sinclair Oil and Gas Company, Cosden Pipe Line Company, Champlin Refining Company, Gypsy Oil Company, Marland Oil Company, Prairie Oil & Gas Company, Humble Oil & Refining Company, Texas Company, and Carter Oil Company.
(Note:—Inside prices in above schedule posted only by Magnolia Petroleum Company.)

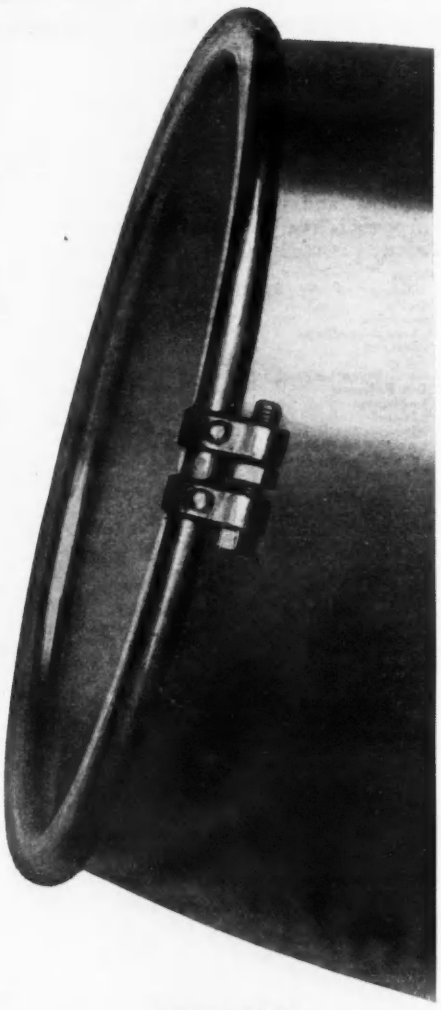
West Texas*

Crane, Upton, Winkler, Pecos and Crockett counties, all gravities	.65	.70@	.92
Glasscock county	.60@	.89	.89
Iatan (all gravities)	93		1.30

* Posted by Kay County Gas Company and Humble Oil & Refining Company.

Texas Panhandle*

Carson and Hutchinson counties—		
Below 32 deg.	.69	.95
32 deg. to 32.9 deg.	.76	.95
33 deg. to 33.9 deg.	.81	.95
34 deg. to 34.9 deg.	.86	.95
35 deg. to 35.9 deg.	.91	.95
36 deg. to 36.9 deg.	.96	.95
37 deg. to 37.9 deg.	1.01	.95
38 deg. to 38.9 deg.	1.06	.95
39 deg. to 39.9 deg.	1.11	.95
40 deg. to 40.9 deg.	1.16	.95
41 deg. to 41.9 deg.	1.21	.95
42 deg. to 42.9 deg.	1.26	.95
43 deg. to 43.9 deg.	1.31	.95
44 deg. and above	1.36	.95
Wheeler county—		
Below 30 deg.	.65	.80
30 deg. to 30.9 deg.	.72	.84
31 deg. to 31.9 deg.	.79	.86
32 deg. to 32.9 deg.	.86	.88
33 deg. to 33.9 deg.	.91	.90
34 deg. to 34.9 deg.	.96	.92
35 deg. to 35.9 deg.	1.01	.94
36 deg. to 36.9 deg.	1.06	.96
37 deg. to 37.9 deg.	1.11	.98
38 deg. to 38.9 deg.	1.16	1.00
39 deg. to 39.9 deg.	1.21	1.02
40 deg. to 40.9 deg.	1.26	1.04
41 deg. to 41.9 deg.	1.31	1.06
42 deg. to 42.9 deg.	1.36	1.08
43 deg. to 43.9 deg.	1.41	1.10
44 deg. and above	1.46	1.12



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THE SPECIAL BILGED SIDES that make Hackney Seamless Removable Head Barrels so easy to up-end and move about.

THE EASILY REMOVED HEAD. Just loosen *one* bolt and the head slips off.

THE FULL UNOBSTRUCTED OPENING WHEN THE HEAD IS REMOVED. There are no lugs or inward projections to catch the material when the barrels are being emptied.

THE STRONG LEAK-PROOF CONSTRUCTION that assures safe delivery. No bother with claims for damaged shipments—no disappointing delays.

THE EXTREMELY NEAT, UNBATTERED APPEARANCE OF HACKNEY BARRELS, EVEN AFTER YEARS OF SERVICE.

These are a few of the things that make Hackney Barrels favorites with *customers*. There are many other reasons why *shippers* prefer them, too.

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1143 Continental Bank Bldg., Chicago, Ill.
1319 Vanderbilt Concourse Bld., New York
5721 Greenfield Avenue, Milwaukee, Wis.

Hackney
MILWAUKEE

Texas Panhandle* (Cont'd)

	Per barrel 1928.	Per barrel 1927.
Gray county—		
Below 29 deg.	.68	.80
29 deg. to 29.9 deg.	.73	.82
30 deg. to 30.9 deg.	.78	.84
31 deg. to 31.9 deg.	.83	.86
32 deg. to 32.9 deg.	.96	.88
33 deg. to 33.9 deg.	1.01	.90
34 deg. to 34.9 deg.	1.06	.92
35 deg. to 35.9 deg.	1.11	.94
36 deg. to 36.9 deg.	1.16	.96
37 deg. to 37.9 deg.	1.21	.98
38 deg. to 38.9 deg.	1.26	1.00
39 deg. to 39.9 deg.	1.31	1.02
40 deg. to 40.9 deg.	1.36	1.04
41 deg. to 41.9 deg.	1.41	1.06
42 deg. to 42.9 deg.	1.46	1.08
43 deg. to 43.9 deg.	1.51	1.10
44 deg and above.	1.56	1.12
†Panola county—		
32 deg. to 32.9 deg.	.96	.96
33 deg. to 33.9 deg.	.98	.98
34 deg. to 34.9 deg.	1.00	1.00
35 deg. to 35.9 deg.	1.02	1.02
36 deg. to 36.9 deg.	1.04	1.04
37 deg. to 37.9 deg.	1.06	1.06
38 deg. and above.	1.08	1.08

* Posted by Humble Oil & Refining Company, Gulf Pipe Line Company, Magnolia Petroleum Company, and Kay County Gas Company.
† Posted by Sun Oil Company and National Refining Company.

Indiana-Illinois*

Illinois	1.55	1.77
Indiana	1.37	1.47
Plymouth Ill.	1.28	1.33
Princeton, Ind.	1.55	1.60
Waterloo	1.25	1.35
Saginaw (Mich.)	1.90@2.05	2.03

* Posted by Ohio Oil Company.

Kentucky-Tennessee*

Ragland	.95	95
Somerset grade in Cumberland lines.	1.70	1.50

* Posted by Joseph Seep Purchasing Agency

Gulf Coast*

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Pierce Junction, and Spindletop Junction.)

Grade A	1.20	1.20
Grade B, 25 deg. to 25.9 deg.	1.15	1.15
26 deg. to 26.9 deg.	1.17	1.17
27 deg. to 27.9 deg.	1.19	1.19
28 deg. to 28.9 deg.	1.21	1.21
29 deg. to 29.9 deg.	1.23	1.23
30 deg. to 30.9 deg.	1.25	1.25
31 deg. to 31.9 deg.	1.27	1.27
32 deg. to 32.9 deg.	1.29	1.29
33 deg. to 33.9 deg.	1.31	1.31
34 deg. to 34.9 deg.	1.33	1.33
35 deg. to 35.9 deg.	1.35	1.35
†36 deg. to 36.9 deg.	1.37	1.37
37 deg. to 37.9 deg.	1.39	1.39
38 deg. to 38.9 deg.	1.41	1.41
39 deg. to 39.9 deg.	1.43	1.43
40 deg. and above.	1.45	1.45
Laredo	.95	95
Piedras Pintas	1.85	1.85
Evangeline	1.15	1.15
Jennings, La.	1.05	1.15
Saratoga, Batson, Dayton	1.20	1.40

* Posted by Humble Oil & Refining Company, Gulf Pine Line Company, Magnolia Petroleum Corporation, Texas Company and Sun Pipe Line Company.
† 36 deg. and higher posted only by Texas Company.

South, Central and Southwestern Texas*

Luling	1.00	1.00
Mirando	1.00	1.00
Rockdale-Minerva—		
below 38 deg.	1.25	1.25
38 deg. to 38.9 deg.	1.27	1.25
39 deg. to 39.9 deg.	1.29	1.25
40 deg. and above.	1.31	1.25
†Thrall	...	...
Callinan	1.75	1.75
**Somerset—		
32 deg. to 32.9 deg.	1.05	1.05
33 deg. to 33.9 deg.	1.07	1.07
34 deg. to 34.9 deg.	1.09	1.09
35 deg. to 35.9 deg.	1.11	1.11
36 deg. to 36.9 deg.	1.13	1.13
37 deg. to 37.9 deg.	1.15	1.15
38 deg. and above.	1.17	1.17
*Lytton Springs		
Below 33 deg.	1.05	...
33 deg. to 33.9 deg.	1.07	...
34 deg. to 34.9 deg.	1.09	...
35 deg. to 35.9 deg.	1.11	...
36 deg. to 36.9 deg.	1.13	...
37 deg. to 37.9 deg.	1.15	...
38 deg. to 38.9 deg.	1.17	...
39 deg. to 39.9 deg.	1.19	...
40 deg. to 40.9 deg.	1.21	...
41 deg. to 41.9 deg.	1.23	...
42 deg. to 42.9 deg.	1.25	...
43 deg. to 43.9 deg.	1.27	...
44 deg. to 44.9 deg.	1.29	...
45 deg. to 45.9 deg.	1.31	...
46 deg. to 46.9 deg.	1.33	...
47 deg. to 47.9 deg.	1.35	...
48 deg. to 48.9 deg.	1.37	...
49 deg. to 49.9 deg.	1.39	...
50 deg. to 50.9 deg.	1.41	...
51 deg. to 51.9 deg.	1.43	...
52 deg. and above.	1.45	...

* Posted by Texpata Pipe Line Company, Humble Pipe Line Company and Magnolia Petroleum Company.
† Same as Midcontinent, less 19½c. per 100 pounds freight.
** Posted by Grayburg Pipe Line Company and Pioneer Oil and Refining Company.

California*

Signal Hill, Huntington Beach, Inglewood†, Olinda-Brea Canyon, Torrance and Richfield—		
14 deg. to 14.9 deg.	.85	.85
15 deg. to 15.9 deg.	.85	.85
16 deg. to 16.9 deg.	.85	.85
17 deg. to 17.9 deg.	.85	.85
18 deg. to 18.9 deg.	.85	.85
19 deg. to 19.9 deg.	.85	.85
20 deg. to 20.9 deg.	.85	.85
21 deg. to 21.9 deg.	.89	.86
22 deg. to 22.9 deg.	.93	.87
23 deg. to 23.9 deg.	.97	.88
24 deg. to 24.9 deg.	1.01	.89
25 deg. to 25.9 deg.	1.05	.90
26 deg. to 26.9 deg.	1.09	.92
27 deg. to 27.9 deg.	1.13	.94
28 deg. to 28.9 deg.	1.17	.96
29 deg. to 29.9 deg.	1.21	.98
30 deg. to 30.9 deg.	1.25	1.00
31 deg. to 31.9 deg.	1.30	1.03
32 deg. to 32.9 deg.	1.35	1.06

† Inglewood posted only up to 28.9 degrees;

California* (Cont'd)

	Per barrel 1928.	Per barrel 1927.
Olinda-Brea Canyon to 30.9 degrees. Montebello, Whittier† and La Habra†—		
14 deg. to 20.9 deg.	.85	.85
21 deg. to 21.9 deg.	.89	.85
22 deg. to 22.9 deg.	.92	.85
23 deg. to 23.9 deg.	.95	.85
24 deg. to 24.9 deg.	.98	.85
25 deg. to 25.9 deg.	1.01	.86
26 deg. to 26.9 deg.	1.04	.87
27 deg. to 27.9 deg.	1.07	.88
28 deg. to 28.9 deg.	1.10	.89
29 deg. to 29.9 deg.	1.13	.90
30 deg. and above.	1.16	.91

† Whittier and La Habra posted only to 22.9 degrees.

Athens, Rosencrans, and Dominguez—		
24 deg. to 24.9 deg.	1.01	.89
25 deg. to 25.9 deg.	1.05	.90
26 deg. to 26.9 deg.	1.09	.92
27 deg. to 27.9 deg.	1.13	.94
28 deg. to 28.9 deg.	1.17	.96
29 deg. to 29.9 deg.	1.21	.98
30 deg. to 30.9 deg.	1.25	1.00
31 deg. to 31.9 deg.	1.30	1.03
32 deg. to 32.9 deg.	1.35	1.06
33 deg. to 33.9 deg.	1.41	1.09
34 deg. to 34.9 deg.	1.47	1.12
35 deg. to 35.9 deg.	1.53	1.15
36 deg. to 36.9 deg.	1.59	1.18
37 deg. to 37.9 deg.	1.65	1.21
38 deg. to 38.9 deg.	1.71	1.24
39 deg. to 39.9 deg.	1.77	1.27
40 deg. to 40.9 deg.	1.83	1.30
41 deg. to 41.9 deg.	1.89	1.33
42 deg. to 42.9 deg.	1.95	1.36
Coyote Hills—		
14 deg. to 20.9 deg.	85	.85
21 deg. to 21.9 deg.	.88	.85
22 deg. to 22.9 deg.	.91	.87
23 deg. to 23.9 deg.	.94	.88
24 deg. to 24.9 deg.	.97	.89
25 deg. to 25.9 deg.	1.00	.90
26 deg. to 26.9 deg.	1.04	.91
27 deg. to 27.9 deg.	1.08	.92
28 deg. to 28.9 deg.	1.12	.93
29 deg. to 29.9 deg.	1.16	.94
30 deg. to 30.9 deg.	1.20	.95
Santa Fe Springs—		
21 deg. to 24.9 deg.	.85	.85
25 deg. to 25.9 deg.	.89	.86
26 deg. to 26.9 deg.	.92	.87
27 deg. to 27.9 deg.	.95	.88
28 deg. to 28.9 deg.	.98	.89
29 deg. to 29.9 deg.	1.01	.91
30 deg. to 30.9 deg.	1.04	.93
31 deg. to 31.9 deg.	1.07	.95
32 deg. to 32.9 deg.	1.10	.97
33 deg. to 33.9 deg.	1.15	.99
34 deg. to 34.9 deg.	1.20	1.01
35 deg. to 35.9 deg.	1.25	1.03
36 deg. to 36.9 deg.	1.30	1.06
37 deg. to 37.9 deg.	1.35	1.09
38 deg. and above.	1.40	1.12
39 deg. to 39.9 deg.	1.45	1.15
Midway-Sunset - Elk Hills, Lost Hills, Kern Rivert, Newhallt, McKittrickt and Buena Vista Hill—		
14 deg. to 19.9 deg.	75	75
20 deg. to 20.9 deg.	77	77
21 deg. to 21.9 deg.	79	79
22 deg. to 22.9 deg.	.82	.81
23 deg. to 23.9 deg.	.86	.83
24 deg. to 24.9 deg.	.90	.85
25 deg. to 25.9 deg.	.95	.87
26 deg. to 26.9 deg.	1.00	.89
27 deg. to 27.9 deg.	1.05	.91
28 deg. to 28.9 deg.	1.10	.93
29 deg. to 29.9 deg.	1.16	.96
30 deg. to 30.9 deg.	1.22	.99
31 deg. to 31.9 deg.	1.28	1.02
32 deg. to 32.9 deg.	1.34	1.05
33 deg. to 33.9 deg.	1.40	1.08

† Newhall, McKittrick and Kern River posted only to 19.9 degrees; Midway, Sunset, Elk Hills and Buena Vista Hills to 33.9 degrees. Wheeler Ridge and Coalinga—

14 deg. to 19.9 deg.	75	75
20 deg. to 20.9 deg.	.77	.76
21 deg. to 21.9 deg.	.79	.77
22 deg. to 22.9 deg.	.82	.78
23 deg. to 23.9 deg.	.85	.79
24 deg. to 24.9 deg.	.88	.80
25 deg. to 25.9 deg.	.91	.81
26 deg. to 26.9 deg.	.94	.82
27 deg. and above.	.98	.83
28 deg. to 28.9 deg.	1.02	.85
29 deg. to 29.9 deg.	1.06	.87
30 deg. to 30.9 deg.	1.10	.89
31 deg. to 31.9 deg.	1.14	.91
32 deg. to 32.9 deg.	1.18	.93
33 deg. to 33.9 deg.	1.22	.95
34 deg. to 34.9 deg.	1.26	.97
35 deg. and above.	1.30	.99

* California fields posted by Standard Oil of California and Union Oil Company.

Louisiana and Arkansas*

Bellevue	1.25	1.25
Bull Bayou, Caddo, Haynesville, El Dorado, Homer, Crichton, De Soto—		
28 deg. and below.	.81	1.10
28 deg. to 28.9 deg.	.88	1.12
29 deg. to 29.9 deg.	.95	1.14
30 deg. to 30.9 deg.	1.02	1.16
31 deg. to 31.9 deg.	1.09	1.18
32 deg. to 32.9 deg.	1.16	1.20
33 deg. to 33.9 deg.	1.21	1.22
34 deg. to 34.9 deg.	1.26	1.24
35 deg. to 35.9 deg.	1.31	1.26
36 deg. to 36.9 deg.	1.36	1.28
37 deg. to 37.9 deg.	1.41	1.30
38 deg. to 38.9 deg.	1.46	1.32
39 deg. to 39.9 deg.	1.51	1.34
40 deg. to 40.9 deg.	1.56	1.36
41 deg. to 41.9 deg.	1.61	1.38
42 deg. to 42.9 deg.	1.66	1.40
43 deg. to 43.9 deg.	1.71	1.42
44 deg. and above.	1.76	1.44@1.60
Pine Island.	1.40	1.40
Smackover, below 24 deg.	.75	1.00
24 deg. and above.	.90	1.25
†Stephens, below 28 deg.	.75	1.10
28 deg. to 28.9 deg.	.79	1.20
29 deg. to 29.9 deg.	.84	1.24
30 deg. to 30.9 deg.	.87	1.28
31 deg. to 31.9 deg.	.91	1.32
32 deg. and above.	.95	1.36
†Urania	.85	1.00
**Calion (East El Dorado).	.90	1.00
**Starks Dome, La.	1.40	1.40
Cotton Valley		
28 deg. and below.	.81	1.00
28 deg. to 28.9 deg.	.88	1.00
29 deg. to 29.9 deg.	.95	1.00
30 deg. to 30.9 deg.	1.02	1.00
31 deg. to 31.9 deg.	1.09	1.00
32 deg. to 32.9 deg.	1.16	1.00
33 deg. to 33.9 deg.	1.21	1.00
34 deg. to 34.9 deg.	1.26	1.00
35 deg. to 35.9 deg.	1.31	1.00
36 deg. to 36.9 deg.	1.36	1.00
37 deg. to 37.9 deg.	1.41	1.00
38 deg. to 38.9 deg.	1.46	1.00
39 deg. to 39.9 deg.	1.51	1.00
40 deg. to 40.9 deg.	1.56	1.00
41 deg. to 41.9 deg.	1.61	1.00
42 deg. to 42.9 deg.	1.66	1.00

Louisana-Arkansas*—(Cont'd)

	Per barrel 1928.	Per barrel 1927
Cotton Valley (Cont'd)—		
43 deg. to 43.9 deg.	1.71	1.00
44 deg. and above.	1.76	1.00
24 deg. and above.	.90	1.15@1.21

* Posted by—The Texas Company.
Standard Oil Company of Louisiana.
Gulf Pipe Line Company.
Magnolia Petroleum Company.
** Posted by Gulf Pipe Line Company only.
† Posted by Paragon Development Company.
‡ Posted by Atlantic Oil Producing Company.

Western Kentucky*

Western Kentucky, all gravities	1.48	1.33
‡Clay county, Tenn.	1.50	1.50
‡Cumberland, Barren and Monroe counties	1.50	1.50
†Oil in lines of Stoll Oil Refining Company in Oil City, Ky.	1.65	1.50

* Posted by Indian Refining Company and Ohio Oil Company.
† Posted by Stoll Oil Refining Company.
‡ Posted by Paragon Development Company.

Rocky Mountain*

Big Muddy	1.33	1.25
Byron	1.33	2.50
Cat Creek	1.33	1.33
Elk Basin	1.48	1.33
Greybull	1.33	1.33
Hamilton Dome	.85	1.35
Kevin	1.20	1.20
Lance Creek	1.48	1.33
Lake Basin	2.20	2.25
Grass Creek, light	1.48	1.33
heavy	.90	.90
Lander	.80	2.10
Lost Soldier	.95	1.60
Mule Creek	1.10	1.30
Notches	.65	.65
Osage	1.33	1.55
Poison Spider	1.00	1.00
Rock Creek	1.33	1.30
†Salt Creek—		
28 deg. to 28.9 deg.	.88	1.12
29 deg. to 29.9 deg.	.95	1.14
30 deg. to 30.9 deg.	1.02	1.16
32 deg. to 32.9 deg.	1.09	1.20
33 deg. to 33.9 deg.	1.21	1.22
34 deg. to 34.9 deg.	1.26	1.24
35 deg. to 35.9 deg.	1.31	1.26
36 deg. to 36.9 deg.	1.36	1.28
37 deg. to 37.9 deg.	1.41	1.30
38 deg. to 38.9 deg.	1.46	1.32
39 deg. to 39.9 deg.	1.51	1.34
40 deg. to 40.9 deg.	1.56	1.36
41 deg. to 41.9 deg.	1.61	1.38
42 deg. to 42.9 deg.	1.66	1.40
43 deg. to 43.9 deg.	1.71	1.42
44 deg. and above.	1.76	1.44@1.60
Sunburst	1.65	1.50
Torchlight	1.33	2.00
Hogback, N. Mex.	1.38	1.40
Artesia, N. Mex.	1.08	1.00
Rex Lake	1.10	1.10
*Florence, Colo.	1.60	1.60
*Moffatt, Colo.	.85	.85
Tow Creek, Colo.	.72	.72
Ferris	1.60	..
Pilot Butte	1.75	..
Simpson Ridge	.80	..
South Casper Creek	1.00	..

* Posted by Texas Company.
† Posted by Midwest Refining Company and Ohio Oil Company.
(Note:—Osage, Cat Creek, Salt Creek and Hogback posted by Midwest Refining Company; remainder by Ohio Oil Company, unless otherwise noted; Grass Creek and Elk Basin posted by both companies.)

Canada*

Oil Springs	2.07	2.18
Petrolia	2.00	2.11
(Add 20½c. per barrel to each grade to include allowance by government to producers.)		

* Posted by Imperial Oil Company, Ltd.

Mexico

F.o.b. terminals Mexican ports (based on contract)—		
* Tuxpam	.83	1.35
† Panuco	1.10	1.16

* Plus 26.35 cents tax.
† Plus 15.373 cents tax.

Refinery Products

Gasoline weakened further at Southwestern refineries last week, prices being ½c. to ¼c. per gallon lower on most grades. The local market showed no change, but the undertone had eased off a little.

Kerosene was strong in this market, but declined fractionally in the Midcontinent area. Lubricating oils were steady and in good demand. The wax market again advanced. Fuel and gas oils were quiet and unchanged.

Gasoline production again established a new high record in July, when the daily average output was 1,061,000 barrels. Daily average domestic demand for gasoline passed the 1,000,000-barrel mark in July for the first time in history, when it amounted to 1,032,000 barrels. This represents an increase over June of 65,000 barrels and over July, 1927, of 72,000 barrels, or 7.5 percent. Daily average exports of gasoline showed a small increase. Stocks of gasoline again showed a material decline, decreasing in July from 34,393,000 barrels on the first of the month to 30,392,000 barrels on hand July 31. At the current rate of total demand these stocks represent 25 days' supply, as compared with 30 days' supply on hand at the end of the previous month and 37 days' supply on hand July 31, 1927.

The demand for kerosene rallied in July, the Department of Commerce reports, but stocks showed a small increase. Both the daily average production and daily average domestic demand for lubricants declined in July as compared with June. Stocks of wax again fell off.

The refinery data for the Department of Commerce report were compiled from schedules of 334 refineries with an aggrgate daily crude oil capacity of 3,166,000 barrels. These refineries operated during July at 82 percent of their recorded capacity, as compared with 326 refineries operating at 81 percent of their capacity in June.

Tankwagon Price Changes

There were no changes in tankwagon prices for either gasoline or kerosene last week. In the Eastern area the market appears firm on both products, while in the Southwest and Central States reductions in the wholesale prices of gasoline had not reached the point where the tankwagon basis was affected.

Market Conditions

Gasoline and Naphtha.—There was an easier feeling in gasoline last week, but the local market showed no changes. Refiners were quoting motor gasoline in tankcar lots at 11¾c. per gallon, f.o.b. Bayonne refineries, and this price was pretty well adhered to on the part of the leading sellers. Further declines in the market at Midcontinent refineries, however, tended to weaken the general position. The tankwagon price basis held unchanged at 18c. per gallon, with fair buying reported. Export sales had fallen off sharply, with the market quotably unchanged both here and at the Gulf. July gasoline production was 32,884,000 barrels, as compared with 30,675,000 barrels in June. Stocks on hand July 31 were 30,392,000 barrels, as contrasted with 34,393,000 barrels held at the close of the previous month and stocks of 39,106,000 barrels on July 31, 1927.

Kerosene.—Sales were showing improvement last week and the market continued firmly held. Water white was firm at 8½c. a gallon, in tankcar lots Bayonne refineries, with the tankwagon quotation unchanged at 15c. per gallon. Reports from Tulsa indicated a slight easing off in the position of kerosene at Oklahoma and North Texas refineries, but the market continued firm at other points. Export business was fair, prices holding steady and unchanged on both bulk and cased stocks. July kerosene production was 4,994,000 barrels, against 4,849,000 barrels in the previous month. Stocks on hand July 31 aggregated 81,470,000 barrels, as compared with 9,143,000 barrels on hand July 31, last year.

Fuel and Gas Oils.—There was a steady demand for fuel oil last week, and the market was steady at $1.05 per barrel, in bulk f.o.b New York and New Jersey refinery terminals. Diesel oil was quiet and unchanged at $2 a barrel, bulk, at local refineries. Gas oil demand was fair, with the market held at 5¼c. a gallon. bulk, Bayonne, although this quotation was reported coming in for shading in some quarters. July producution of gas and fuel oils was 36,941,000 barrels, against 35,565,000 barrels in June. Output for the first seven months of 1928 was 239,269,000 barrels, as compared with 226,085,000 barrels in the corresponding period last year. Stocks on hand July 31, including California heavy crude and fuel oil, were 133,073,000 barrels, against 130,249,000 barrels held June 30 and 121,901,000 barrels on hand July 31 last year.

Paraffin Wax.—Demand continued active last week, and the market was again higher, advancing an average of ½c. per pound. Revised quotations follow:—White crude scale, 122-124 a.m.p., 5¼c. to 5⅜c. per pound; 124-126 a.m.p., 5⅜c. to 5½c.; yellow scale, 124-126 a.m.p., 5c. to 5⅛c.; match, 105-108 a.m.p., 5½c. to 5⅝c.; 111-115 a.m.p., 5¾c. to 5⅞c.; fully refined, 118-120 a.m.p., 5½c. to 5⅝c.; 123-125 a.m.p., 5⅝c. to 5¾c.; 125-127 a.m.p., 5⅞c. to 6c.; 128-130 a.m.p., 6⅛c. to 6¼c.; 130-132 a.m.p., 6¾c. to 6⅞c.; 133-135 a.m.p., 7⅛c. to 7⅜c.; 135-137 a.m.p., 7¾c.; semi-refined, 122-124 a.m.p., 5⅜c. to 5½c. per pound. July production of paraffin wax was 45,273,000 pounds, against 50,792,000 pounds in June. Stocks on hand July 31 were 84,476,000 pounds, against 91,989,000 pounds June 30 and 191,501,000 pounds July 31 last year.

Petrolatum.—Cream was coming in for a fair call in last week's market, sellers quoting 6½c. to 6¾c. per pound in barrels, car lot basis. A moderate call for snow white ruled, with the market holding at 8¼c. to 8½c. per pound. Lily white was also selling in fair volume, at 8c. to 8¼c. per pound. Demand for the lower grades was rather quiet with the domestic trade, but export buyers were reported in the market in a fair way.

Medicinal Oil.—Russian 885-890, s.g., 325-330 viscosity oil in drums was reported in good demand last week, with importers quoting the market at 85c. to 90c. per gallon. Demand for the lower grades was also reported moderately active, prices holding steady. Domestic mineral oil trade continued along routine lines, no price changes developing during the week.

Lubricating Oil.—Steady markets for lubricating oil prevailed throughout the past week. Refiners continued to show firm price views on cylinder stocks, and the local jobbing market reflected this condition. A better inquiry for industrial lubricating oils was reported during the week. Red oils were showing a little more strength. July production of lubricating oil was 2,827,000 barrels, as compared with 3,009,000 barrels in June. Stocks on hand at the close of the month were 7,667,000 barrels, against 7,496,000 barrels held by

refiners July 31, last year. The movement through the local market during the week of September 6 was as follows:—

	Receipts Barrels.	Exports Gallons.
Friday	.....	198,850
Saturday	.....	56,200
Monday	*	*
Tuesday	.....	242,650
Wednesday	.....	100,950
Thursday	.....	75,360
Totals	.....	391,050

* Holiday.

Current Prices

(For late price changes, see page 2)

Gasoline and Naphtha

Gasoline, U.S. Motor, tankwagon	gal.	$0.18 @ —
Bayonne, tankcars	gal.	.11¾@ .12¼
Navy, 58-60, 437 e. p., N. Y.: export, bulk	gal.	.12 @ —
cases	gal.	.2690@ —
Naphtha, 61-63 deg., export, bulk	gal.	.13 @ —
64-66 deg., export, bulk	gal.	.13½@ —
66-68 deg., export, bulk	gal.	.16½@ —

Kerosene

Kerosene, tankwagon	gal.	.15 @ —
S.W., export, bulk	gal.	.07¾@ —
cases	gal.	.1740@ —
W. W. Bayonne, bulk	gal.	.08½@ —
export, bulk	gal.	.09 @ —
cases	gal.	.1865@ —

Fuel* and Gas Oils

Gas oil, Bayonne, 32-36 deg., bulk	gal.	.05¼@ —
†Diesel oil, Bayonne, bulk	bbl.	2.00 @ —
Furnace oil, delivered, 400 gals. or more, bulk	gal.	.10 @ —
50 to 399 gals., bulk	gal.	.16½@ —
Fuel oil, bulk, f.o.b. N. Y. and N. J. refinery terminals—		
Monday	bbl.	1.05 @ —
Tuesday	bbl.	1.05 @ —
Wednesday	bbl.	1.05 @ —
Thursday	bbl.	1.05 @ —
Friday	bbl.	1.05 @ —
Saturday	bbl.	1.05 @ —

* Lighterage charge, 5c. per barrel.
† Lighterage charge, 6.5c. per barrel.

Lubricating Oil

(Car lots, in barrels)

Cylinder, filt., D 600	gal.	.32½@ .33
E 600	gal.	.26 @ .27
Unfiltered, 600 s. r.	gal.	.19½@ .20
650 s. r.	gal.	.22½@ .23
600 flash, s. r.	gal.	.25½@ .26
630 flash, s. r.	gal.	.34½@ .35
Bright stock, light	gal.	.44 @ .45
Motor, 600, No. 6 color	gal.	.35½@ .36
500, No. 7 color	gal.	.33½@ .34
400, No. 6¼ color	gal.	.31½@ .37
300, No. 6 color	gal.	.30½@ .31
200, No. 3¾ color	gal.	.24½@ .25
Pale, 100 vis., No. 2¼ color	gal.	.13 @ —
180 vis., No. 3¼ color	gal.	.20 @ .20½
280 vis., No. 3¾ color	gal.	.24 @ .24½
Red, 200 vis., No. 6 color	gal.	.16½@ .17
250 vis., No. 6 color	gal.	.17½@ .18
300 vis., No. 6¼ color	gal.	.18½@ .19

Paraffin Wax

Crude, white, scale— 122@124 A.m.p., bags	lb.	.05¼@ .05⅝
124@126 A.m.p., bags	lb.	.05⅝@ .05½
yellow, scale, 124@126 A.m.p., bags	lb.	.05 @ .05⅛
Match, 105@108 A.m.p., bags	lb.	.05½@ .05⅝
111@115 A.m.p., bags	lb.	.05⅝@ .05⅞
†Fully refined, slabs, 118@120 A.m.p., bags	lb.	.05½@ .05⅝
123@125 A.m.p., bags	lb.	.05⅝@ .05¾
125@127 A.m.p., bags	lb.	.05⅞@ .06
128@130 A.m.p., bags	lb.	.06⅛@ .06¼
130@132 A.m.p., bags	lb.	.06¾@ .06⅞
133@135 A.m.p., bags	lb.	.07⅛@ .07⅝
135@137 A.m.p., bags	lb.	.07¾@ —
Semi-refined, solid, bags, 122@ 124 A.m.p., bags	lb.	.05⅜@ .05½

† For fully refined, in cases, add ¼c. per lb.

White Medicinal Oil

Domestic, 890@895 s. g.	gal.	1.00 @ 1.05
875@880 s. g., drums	gal.	.75 @ .80
865@870 s. g., drums	gal.	.70 @ .75
Russian, 860@865 s. g., 80-85 vis., drums	gal.	.70 @ .75
870@875 s. g., 150-155 vis., drums	gal.	.75 @ .80
875@880 s. g., 180-195 vis., drums	gal.	.80 @ .85
885@890 s. g., 325-330 vis., drums	gal.	.85 @ .90

Petrolatum

(Car lots)

Cream, barrels	lb.	.06½@ .06¾
Amber, dark, barrels	lb.	.03½@ .03⅝
light, barrels	lb.	.03¾@ .04
Dark green, barrels	lb.	.02 @ .02½
Lily white, barrels	lb.	.08 @ .08½
Snow white, barrels	lb.	.08¼@ .08½
Veterinary, barrels	lb.	.03 @ .03½

Prices at Refineries

(Bulk, tankcar lots)

Gasoline and Naphtha

North Texas

48-50, 450 end point, naphtha	gal.	.09 @ .09¼
50-52, 450 end point, naphtha	gal.	.09 @ .09¼
56-58, 450 end point, naphtha	gal.	.09¼@ —
58-60, 437 end point, 140 i.b.p., (U. S. Motor)	gal.	.09¼@ .09¼
60-62, 450 end point, gasoline	gal.	.09⅝@ .09¾
64-66, 390 end point, gasoline	gal.	.10 @ .10⅛
64-66, 375 end point, gasoline	gal.	.10⅛@ .10¼
68-70, 360 end point, gasoline	gal.	.10¾@ .11
68-70, 350 end point, gasoline	gal.	.10¾@ .11
Grade A, 68-70, 375 e.p.	gal.	.09½@ .09⅝
Grade B, 76-82, 375 e.p.	gal.	.09½@ .09⅝
Grade C, 86-88, 350 e.p.	gal.	.09½@ .09⅝

Oklahoma

50-52, 450 end point	gal.	.09 @ .09¼
56-58, 450 end point	gal.	.09 @ .09¼
58-60, 450 end point	gal.	.09 @ .09¼
58-60 (U. S. Motor), 437 end point, i.b.p., 140	gal.	.09¼@ .09⅜
60-62, 400 end point	gal.	.09⅝@ .09⅞
64-66, 390 end point	gal.	.10⅛@ .10¼
64-66, 375 end point	gal.	.10¼@ .10⅜
68-70, 360 end point	gal.	.10⅜@ .11

Oklahoma (Cont'd)

68-70, 350 end point	gal.	.10⅜@ .11
Grade A, 72-78, under 375 end point	gal.	.09½@ .09⅝
Grade AA, 80-87.9, 90% recovery,	gal.	.09½@ .09⅝
Grade B, 76-82, 375 e.p.	gal.	.09½@ .09⅝
Grade BB, 84-92, 85% recovery,	gal.	.09½@ .09⅝
Grade C, 80-88, 350 e.p.	gal.	.09½@ .09⅝

Pennsylvania

52 grav., naphtha	gal.	.11½@ .11⅝
54 grav., naphtha	gal.	.11½@ .11⅝
56 grav., naphtha	gal.	.11½@ .11⅝
58 grav., naphtha	gal.	.12 @ .12¼
60 grav., gasoline	gal.	.12½@ .12⅝
62 grav., gasoline	gal.	.13 @ —

North Louisiana-South Arkansas

58-60, 450 end point	gal.	.10 @ .10¼
58-60, 437 end point (U.S. Motor),	gal.	.10¼@ .10½
64-66, 375 end point	gal.	.11 @ .11¼

Gulf Coast (Export)

Navy, bulk	gal.	.10¾@ —
60-62, 390 e.p.	gal.	.11¾@ —
64-66, 375 e.p.	gal.	.12¼@ —

California

56-58, 375 end point	gal.	.09 @ .09½

Kerosene

Gulf Ports (Export)

Prime white, bulk	gal.	.06¾@ —
Water white, bulk	gal.	.07¾@ —

North Texas

41-43 water white	gal.	.06⅛@ .06¼
42-44 water white	gal.	.06¾@ .07

Oklahoma

41-43 water white	gal.	.06¼@ .06⅜
42-44 water white	gal.	.06⅜@ .07

Pennsylvania

45 water white	gal.	.07½@ .07¾
46 water white	gal.	.08 @ .08¼
47 water white	gal.	.08¼@ —

North Louisiana-South Arkansas

41-43 water white kerosene	gal.	.06⅞@ .07

Fuel and Gas Oils

Pennsylvania

30-34 fuel oil	gal.	.04⅞@ .05
36-40 fuel oil	gal.	.04⅞@ .06

Oklahoma

14-16 fuel oil	bbl.	.55 @ .57½
18-22 fuel oil	bbl.	.57½@ .60
22-26 fuel oil	bbl.	.60 @ .62½
24-26 fuel oil	bbl.	.62½@ .65
26-30 fuel oil	bbl.	.70 @ .72½
28-30 fuel oil	bbl.	.80 @ .82½
32-36 gas oil	gal.	.02¾@ .02½
36-38 distillate	gal.	.02¾@ .03
35-37 distillate	gal.	.02¾@ .03
38-40 distillate	gal.	.03 @ .03¼

Kansas

24-26 fuel oil	bbl.	.70 @ .75
32-36 gas oil	gal.	.02½@ .02¾
38-40 distillate	gal.	.03¼@ .03¼

North Texas

32-36 gas oil	gal.	.02¼@ .02⅜
24-26 fuel oil	bbl.	.60 @ .62½
26-30 fuel oil	bbl.	.60 @ .62½

Gulf Coast (South Texas)

Gas oil	gal.	.03⅞@ .04
Fuel oil	bbl.	.90 @ 1.00

Louisiana-Arkansas

32-36 gas oil	gal.	.02½@ .02¾
18-20 fuel oil	bbl.	.60 @ .65
16-20 fuel oil	bbl.	.60 @ .65
38-40 light straw	gal.	.03¼@ .03⅝

California

Fue. oil (at tidewater). bunkers	bbl.	.85 @ 1.00
Diesel oil, 27 plus	bbl.	1.15 @ 1.10

Lubricating Oils

Pennsylvania

150 vis., No. 3 color	gal.	.26 @ .26½
180 vis., No. 3 color	gal.	.29½@ .30
200 vis., No. 3 color	gal	.33 @ .33½
220 vis., No. 3 color	gal.	.35 @ .35½
600 fire steam ref. cyl. stock	gal.	.13 @ .13½
625 fire steam ref. cyl. stock	gal.	.14 @ .14½
650 fire steam ref. cyl. stock	gal.	.15 @ .16½
600 E amber fil. cyl stock	gal.	.17 @ .17½
600 D cyl. stock	gal.	.23 @ .23½
600 cold test (bright filt)	gal.	.36½@ —
600 cold test (dark filt)	gal.	.34½@ —

Oklahoma

100 vis., No. 2 color	gal.	.05½@ .06⅛
100 vis., No. 3 color	gal.	.05½@ .06
150 vis., No. 3 color	gal.	.08¼@ .08½
150 vis., No. 4 color	gal.	.08 @ .08¼
180 vis., No. 4 color	gal.	.09⅜@ .10
180 vis., No. 5 color	gal.	.09¼@ .09⅝
200 vis., No. 3 color	gal.	.09¾@ .10
200 vis., No. 4 color	gal.	.10¾@ .10⅝
200 vis., No. 5 color	gal.	.10¾@ .10¾
220 vis., No. 3 color	gal.	.12 @ .12⅛
220 vis., No. 4 color	gal.	.11 @ .11¼
220 vis., No. 5 color	gal.	.10 @ .10¼
240 vis., No. 3 color	gal.	.13¾@ .14
240 vis., No. 4 color	gal.	.13½@ .13⅝
240 vis., No. 5 color	gal.	.13 @ .13¼
280 vis., No. 3 color	gal.	.15⅝@ .16
280 vis., No. 4 color	gal.	.15½@ .15⅝
280 vis., No. 5¼ color	gal.	.14¼@ .14½

South Texas

100 vis., No. 2 color, unfit.	gal.	.07 @ .07¾
200 vis., No. 3 color, unfit.	gal.	.10¼@ .10¾
500 vis., No. 3½ color, unfit.	gal.	.13¼@ .13¾
200 vis., No. 5 to 6 color, red oil.	gal.	.08½@ .08¾
300 vis., No. 5 to 6 color, red oil.	gal.	.09¼@ .09¾
500 vis., No. 5 to 6 color, red oil.	gal.	.10¾@ .11¼
750 vis., No. 5 to 6 color, red oil.	gal.	.13½@ .14

California

150 vis., 2½ to 3 color		.09 @ .10
200 vis., 2½ to 3 color		.10 @ .10½
300 vis., 3 to 3½ color		.10½@ .11
350 vis., 3½ to 4 color		.11 @ .12
400 vis., 3½ to 4 color		.12 @ .13½
200 vis., 4½ to 5 color		.08½@ .09
300 vis., 5 to 6 color		.09 @ .09½
400 vis., 5 to 6 color		.11 @ .11½
500 vis., 4½ to 5 color		.11¼@ .12
500 vis., 6 to 6½ color		.11 @ .11½
600 vis., 6½ plus color		.12 @ .12¼

Paraffin Waxes

(Bags, car lots)

Pennsylvania

122-124 white, crude, scale	lb.	.05 @ .05¼
124-126 white, crude, scale	lb.	.05¼@ .05½
126-128 white, crude, scale	lb.	.05½@ .05¾

Oklahoma

122-124 white, crude, scale	lb.	.04½@ .04¾
124-126 white, crude, scale	lb.	.04½@ .04¾

Tulsa Petroleum Market

TULSA, Sept. 6, 1928.

The Midcontinent gasoline market was easier in tone during the week with prices generally off ¼c. to ⅜c. a gallon on all grades from the previous week's levels.

There was less evidence of accumulation for deferred shipments by the larger jobbers and car lot marketers during the week with the smaller concerns inclined to confine their buying to one and two car lots for immediate shipment.

Exporters continue to show but little interest in present quotations for high tests; in fact there has been but little if any buying from them in some time. Northern jobbers are a little more interested in these grades and are buying an occasional car for early fall consumption.

Natural gasolines continue to display weakness in sympathy with the refinery grades. There is no buying of this material for deferred shipment in evidence, with trading generally being confined to small lots for immediate movement.

Kerosenes maintained their position in fair shape with prices nominally unchanged from the previous week. However, trading seems to be tapering off in volume with lower prices expected to follow.

The distillate market was unchanged with prices generally reported as being steady at the previous week's levels. A fair demand for immediate shipment was in evidence.

Gas oils continue in fair demand with prices unchanged. The low cold test materials are coming in for a little better play, on increased demand from the smaller industrials for storage.

There was no change in the fuel oil situation from last week and prices are generally unchanged.

The price range, basis group 3 Oklahoma, follows:—

REFINERY GASOLINES—The 58-60 U. S. Motor material is generally quoted at 9c. to 9¼c. a gallon; 60-62 400 e.p., 9½c. to 9¾c.; 64-66 390 e.p., 10¼c. to 10⅜c.; 64-66 375 e.p., 10⅜c. to 10½c.; 68-70 360 e.p., 10¾c. to 11c.

NATURAL GASOLINES—The average price range for all grades of this material is 9c. to 9⅜c. a gallon.

KEROSENES — The 41-43 gravity, water white doctor corrosion test material, 6¼c. to 6⅜c. a gallon; 42-44 gravity, 6⅜c. to 7c. a gallon, with very little available for spot shipment.

DISTILLATES—The 36-38 gravity, light straw material is generally quoted at 2⅞c. to 3c. a gallon for spot shipment; 38-40 gravity, light straw, zero to ten cold test, under 180 flash, 3⅛c. to 3¼c. a gallon.

GAS OILS—All grades 32-36 gravity dark material, 2⅝c. to 2¾c. a gallon; 32-36 gravity, light straw, 2½c. to 2⅝c. a gallon.

FUEL OILS—Prices were nominally unchanged from the previous week's levels.

LUBRICATING OILS & WAXES—Demand continues fair with no change in prices.

Chicago Petroleum Market

CHICAGO, Sept. 7, 1928.

The spot market for gasoline and most other important petroleum products has drifted along mostly unchanged in price the last few days, especially as concerns the Group 3 market, on which much of the Chicago market is based. There have been some softer price indications on the products out of other refining districts, especially West and North Texas, but Oklahoma refiners selling in this market as far as can be determined have mostly held their price intact.

There was a large volume of consumption over the Labor Day holiday, notwithstanding that the weather was not conducive to motoring. With most of the trade, Labor Day ushers in the fall season and for that reason jobbers are waiting to see the effects of early September upon refinery gasoline prices before buying heavily.

In spite of the fact that the spot gasoline market has turned more hesitant, shipments to distributors continue heavy, and Southwestern refiners are expecting to remain with low gasoline stocks for some time to come. September consumption is widely anticipated as being at least as high as that of June. With the coming of cooler days, demand for high gravity gasolines is picking up, especially from the Northern distributors. Prices are well maintained on these products.

Installation of residential and semi-industrial oil burners on a record-breaking scale throughout the Middle West in the last few months has increased the number of oil burners in use to a point where conservative authorities now estimate the total installations at close to 1,000,000 and has emphasized to the petroleum industry the growing importance of the market for heating oils.

Oil companies are closing contracts, both with their refiner sources of supply and with their consumer customers for the fall and winter which indicate that the volume of oil sold for these purposes this year will go far in excess of anything known in any previous season.

Representative tank truck distributors of heating oils report the consumer contracts on their books now are in many cases 100 percent above those of last year in point of gallonage involved.

Rampant price cutting, however, has developed on several grades of the heavier oils. Some contracts in Chicago and other Middle Western points are being made by distributors to supply consumers' needs for 18-20 fuel oil for the winter below 4 cents a gallon. Leading companies declare that price is below cost, but most of the contracts made also carry a range of 1 cent each way from the base price, so that on business even below 4 cents, it will be possible to charge customers later in the season nearly 5 cents if the market improves.

Prices to consumers on the lighter burner oils are stiffer, as sources of supply are not guaranteeing much in the way of deliveries, except where they have signed outright contracts.

Kerosene remains the strongest product on the board and, while stocks all over the country are considered ample, stocks reported by refiners serving this market are smaller and some refiners are still back on shipments. Tractor use and demand for kerosene this fall is expected to be a record. The price is now higher in proportion to motor gasoline than it was some time ago.

Distillates have stiffened in tone in sympathy with kerosene as the heating season nears. Distributors are taking distillates out of the market as well as high grade gas and fuel oil. Prices on good heating oils in tankcars are tending stiffer, although actual advances to date have been few.

Fuel oil is now more stable and steady in tone at prices which represent a slight advantage over the lows reached in the summer, but it is proving a hard job to induce a real strengthening movement in fuel prices, due probably to the record-breaking overhanging stocks and the large quantities of crude fuel unproduced but available. Buying of fuel by consumers is on a somewhat better scale. Slow price appreciation is expected in some quarters.

Ruling quotations were:—

GASOLINE (cents per gallon).—50-52, 450 (naphtha), 9¼c. to 9⅜c.; 56-58, 450, 9¼c. to 9⅜c.; 58-60, 437 (U. S. motor), 9¾c.; 60-62, 400, 10c. to 10¼c.; 64-66, 390, 10⅜c. to 10¾c.; 64-66, 375, 11c. to 11¼c.; 68-70, 360, 11¼c. to 11⅜c.

KEROSENE (cents per gallon).—41-43 water white, 6½c.; 42-44 water white, 7c. to 7⅛c.

FURNACE OILS (cents per gallon).—38-40, straw, 3⅛c. to 3¼c.; 36-38, straw, 3c. to 3⅛c.; 32-34, straw, 2⅞c. to 3c.; 32-36, zero gas oil, 2¾c. to 2⅞c.; 32-36, dark industrial gas oil, 2½c. to 2⅝c.

FUEL OIL (cents per barrel).—38-30, 80c. to 85c.; 26-28, 70c. to 80c.; 24-26, 62½c. to 65c.; 18-22, zero or low sulphur, 60c. to 62½c.; 18-22, high sulphur, 52½c. to 57½c.; Smackover, treated, 82½c.

New Orleans Petroleum Market

NEW ORLEANS, Sept. 7, 1928.

The call for 58-60 U.S. motor gasoline is fair. Prices in tank cars, at refinery, range from 10¼c. to 10½c. a gallon. Delivered to local dealers, freight, taxes and inspection included, the range is 13½c. to 13¾c.

Trading in 41-43 water-white kerosene is fair. Refiners offer this grade at 7¼c. to 7½c. a gallon. The delivered price, including freight, inspection and taxes range from 9½c. to 9¾c. a gallon.

There is weak demand for Bunker C fuel oil at 95c. to $1.05 a barrel alongside, delivered in the harbor.

Petroleum Gossip

J. V. Brazier has been appointed assistant superintendent of the Barnsdall, Okla., plant of Barnsdall Refineries, Inc.

Work has been started by the Sun Oil Company at Toledo, Ohio, which will double the capacity of its refining plant there.

S. H. Keoughan, president of the Continental Oil Company, Denver, has been elected a director of the Lakewood Country Club, Denver.

Lubrication in laundrying is treated in the feature article in the August issue of "Oil-Power," published by the Standard Oil Company of New York.

Gasoline tax receipts in New Jersey amounted to $859,406.04 in July, the largest amount collected in any month since the tax became effective July 1, 1927.

Tax collections for gasoline sales in Colorado in July amounted to $423,557, an increase of $5,500 over July, 1927, since when the tax has been increased from 2 to 3 cents.

The eighth annual convention of the Nebraska Independent Oil Men's Association will be held at Hastings, Neb., December 4 to 6, according to announcement by C. M. Sutherland, secretary.

The Davis Oil Company, Olean, N. Y., has purchased the lease of E. L. Shipper at Rixford, Pa. The transfer includes 114 acres and 38 producing wells. It is planned to drill fifty new wells on the property.

A road development tax of approximately 4 cents on every gallon of gasoline produced in or imported into India has been recommended by the Indian Roads Development Committee in a report recently submitted to the Indian government.

The Sinclair Consolidated Oil Corporation has leased a block of acreage in Ellis county, western Kansas, and will start a test well. The Atlantic Producing Company has land in Rush county, Kansas, and will start developing it.

The Kinney-Coastal Oil Company and the Parker Club, Inc., Los Angeles, have entered into an agreement to drill a test well on a block of several thousand acres, twelve miles west of Walsenburg, Colo. The location is in section 4, range 28, township 68.

Robert T. Charbonnel, 2835 Vallejo street, Denver, August 28, was awarded an oil and gas prospecting permit covering 393 acres of government land in Routt county, Colo., by Walter Spencer, register of the United States land office in Denver.

Tritext Gas Utilities Company has completed survey for a 200-mile gas pipeline from its field in northern Zavala county, Texas, to take in all principal cities and towns in five counties, including Maverick, Zavala, Dimmitt, Frio and LaSalle. The company has completed its line to Uvalde City, county seat of Uvalde county, and is ready to operate.

W. L. White, formerly associated with the Sterling Refining Company, Chicago, has organized the Economical Oil Company, with $100,000 capital and headquarters at 624 South Michigan avenue, Chicago. Mr. White is president; Nicholas Wetzel, vice-president, and Phil Taxman, of the Atlas Petroleum Corporation, treasurer. The new company will conduct a retail oil business, and has already bought several service stations and contemplates buying more.

Gums and Waxes

Sandarac Firmer at Advance—Competition Puts Arabic Sorts Down—Carnauba Holds Steady Under Light Sales

Business in the market for gums and waxes last week was a rather quiet affair. Inquiry involved limited quantities in most instances and actual sales rarely exceeded jobbing proportions. Considering the conservative character of trading, competition was conspicuously absent. While here and there concessions might be granted and sales made at private terms, the general tendency of most merchants was to adhere to recent schedules and not to make any semi-permanent change in the same. Stocks of most materials were adequate for current requirements, and something more.

Trading in sandarac was somewhat more active and local dealers obtained slightly higher levels. Furthermore, the replacement market seemed to be quite firm and prices from the source of supply did not lend themselves to the development of any easier tone in the local market. Spermacetti wax also brought slightly higher levels, with inquiry undergoing some improvement.

Cleaned arabic sorts seemed to have approached a slightly more competitive spot position. Efforts to get business on the books of the importers led to shading of prices. Also, the presence of some distressed was not without its influence in moving prices fractionally in favor of buyers for consumption. The foreign market prices remained very firm.

Waxes as a whole held up well. An excellent call came in for beeswax, keeping spot prices firm and free from competition. Cables from foreign markets emphasized the strength of prices there and the absence of oppressive stocks. Carnauba wax was not in very good demand here but the Brazilian market ignored the absence of request, failed to make unsolicited offerings in most instances, and quoted very firm prices whenever anything was quoted.

Shellac passed through a very quiet period here. Calcutta advanced in the face of pronounced lack of buying here and in London. London quotation showed a net decline on the week, though when reckoned from Tuesday to Thursday, the tendency had been upward. A decline Friday offset earlier gains.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
Sandarac, 1c. per lb.	Arabic, amber sorts, cleaned, ¼c. per lb.
Spermacetti, blocks, 1c. per lb.	Senegal, sorts, ¼c. per lb.
cakes, 1c. per lb.	Shellac, T.N., London, Oct., 6/10c. per lb.
Shellac, T.N., Calcutta, 1¼c. per oz.	Dec., 1.1c. per lb.

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Gums

Aloe.—Business was somewhat brisk at the opening of the week following the holiday. Toward the close it was somewhat slower but undertones and prices remained very firm. Stocks of all grades were moderate in size.

Arabic.—Cleaned amber sorts on the spot sold for as low as 10¾c. per pound during the past week, being a reduction of ¼c. The range as to quantity and seller was to 12c. The shading here was out of line with the firmness of foreign prices and resulted from the somewhat slower demand having induced competition.

Asafetida.—Moderate sized stocks and conservative consuming demand ruled during the past week. Prices were steady to firm, competition being not much of a factor most of the period.

Benzoin.—Stocks available at 40c. per pound were not very large. In fact, stocks available at any price were very conservative. The market was firm and well maintained despite the light demand for spot deliveries of gum from Sumatra.

Camphor.—The market proved to be quite inactive, yet prices were firm. Trading was along quiet lines with prices steady here and in the primary sources of supply.

Myrrh.—Though demand lagged, the market remained strong on the basis of the highly restricted quantity of gum available in this market. Competitors did a fair amount of trading, there being some business done also in powdered.

Olibanum. — Further developments were lacking. The market was generally strong with supplies light and in firm hands. Expansion in demand and a continued call for immediate deliveries would be quickly reflected in spot prices.

Sandarac.—This article was 26c. to 30c. per pound as to seller and quantity. It was firmer at the 1c. rise due to the well maintained prices for replacements and the absence of much competition locally.

Waxes

Bees.—Buyers were fairly active during the past week, trading being sufficient to support prices strongly and to eliminate most competition from the spot market. Cables from foreign points of supply emphasized the strength of replacement costs.

Carnauba.—Stability was the keyhole of this market. Prices were firmly maintained in Brazil and little disposition to make unsolicited offerings existed there. The market situation as a whole was one favorable to the later development of somewhat stronger undertones and possibly higher prices for quick and future deliveries out of spot and shipment holdings.

Spermaceti.—Blocks brought 26c. to 27c. per pound and cakes, 27c. to 28c. These levels were 1c. above those obtained recently and reflected the development of smaller stocks and better request.

Shellac

Prices in Calcutta were up 1¼c. on the week. Those in London showed no net change in the October position, while the December delivery was 2s. higher on the week. Spot quotations underwent no change. However, if the week be considered as beginning Tuesday after the holiday, there was a net advance of 3s. for October and 2s. 6d. for December by the close of business Thursday. Business was rather on the quiet side, though it was intimated that a fair volume was done in seedlac. Free superfine was not readily obtainable, the spot holding virtually nothing but freed up or ground goods. Prices here were rather firm.

London Shellac Prices

The following quotations in shillings per hundredweight have been converted to cents per pound, the calculations being based on the sterling exchange of $4.865. The result is the price of shellac in London, not in the United States; the landed price here would be approximately 2c. more:—

	September 7		August 31	
	Shillings.	Cents.	Shillings.	Cents.
October	217½	47.1	220	47.7
December ..	207½	45	212½	46.1

Calcutta Shellac Prices

Quotations for USSA T.N., c.&f. New York, were as follows:—

	Sept. 7.	Aug. 31.
September.....	44¼c	43c

The highest price during the week was 45½c.; the lowest was 43¼c. One advice reported 75 percent of the crop already shipped.

Stocks of shellac in London showed a marked increase. The total in warehouse September 1 was 15,242 packages, which compared with 13,210 packages in warehouse August 1. Of this quantity 13,229 packages were orange shellac, while the record on August 1 had been 11,131 packages.

(Continued from page 74)

Current prices on gums, waxes, and shellac, formerly printed on pages 4 and 8, are now printed at the end of this market report.

Valuable information on Imports and Exports of Gums, Waxes, and Shellac is given in port lists beginning on page 5.

H. V. F. PRICE Inc., 130 PEARL ST. New York, N. Y.
SHELLAC Cutch Gambier Sumac

James W. Byrnes Shellac Co., Inc.
GUM SHELLAC—BLEACHED SHELLAC and SHELLAC VARNISHES
162 Front Street New York City

HALOWAX SOLID OR LIQUID
HALOWAX CORPORATION
247 Park Avenue, New York, N. Y. Phone: Ashland 5880

BEESWAX, White and Yellow
E. A. BROMUND CO., 258 Broadway, New York
Bayberry, Ceresine, Carnauba, Paraffine and Japan Waxes, Water White Mineral Oil Pearl Floor Wax Polish

Gum Tragacanth - Gum Arabic
Importers
THURSTON & BRAIDICH, 27 Cliff Street, NEW YORK

First:—Ask an
Oil, Paint and Drug Reporter
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Whenever you want anything in the line of Chemicals, Dyestuffs, Drugs, Paints, Oils, Fertilizers.

What you should know about
***The* Duplex Seal**
A PERFECT SEALING & RE-SEALING CAP FOR GLASS BOTTLES, JARS & TIN CONTAINERS

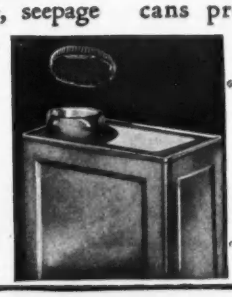
The Duplex Seal is the ideal seal for tin packages for these reasons:

1 Mechanical simplicity and scientific correctness—assuring an absolute and permanent air-tight seal.
2 Liners to meet chemical and physical requirements of the product.
3 Tamper-proof inner seal if desired.
4 Standard designs or special seals having trade-marks handsomely embossed or lithographed.
5 Quick application by means of hand closing tools or power closing machines, where volume is necessary.
6 It cannot "creep" or work loose in shipment regardless of rough handling or transportation conditions.
7 Opened by quarter turn of the wrist. Closed with the same easy motion—a *positive* resealing device.

6 It cannot "creep" or work loose in shipment regardless of rough handling or transportation conditions.

The construction of the Duplex Seal creates an insurance to the packer against leakage, seepage or spoilage of his product in Duplex sealed containers.

All can companies can supply cans provided with Duplex Nozzles.



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Industrial Chemicals

Soda Silicofluoride and Foreign Chlorate of Soda Sharply Higher—Tin Salts Advanced —Barium Chloride Scarce

Coincident with reports that a higher rate of duty would become effective on soda silicofluoride within another thirty days prominent domestic producers placed an advance of ¾c. per pound into effect and were quoting 4¾c. per pound in car lots, and from 5c. to 5⅜c. per pound in less than car lot quantities. The duty will henceforth be computed on the American valuation instead of on foreign valuations as was formerly the case. Owing to the difficulty of ascertaining what the actual domestic values are from time to time, it was estimated that the new duty would range anywhere from 1¼c. to 1⅞c. per pound.

The market as a whole had an undertone of sustained strength. One of its outstanding features was an advance of 1c. per pound on the part of foreign holders of chlorate of soda as the result of higher prices abroad. Domestic producers were securing a large volume of orders for this chemical as a weed killer. The market for barium chloride showed still firmer tendencies as nothing was being offered from abroad excepting for future shipment. This prompted the domestic producers to ask still higher prices.

Most of the various salts of tin were revised upwards because of a recent increase in cost of the metal. Metallic antimony showed a slight advance, but this did not influence prices for the oxide or the needle. Blue vitriol had reverted to the routine customary during the months of September and October, but this lull will afford producers an opportunity of building up reserves for another season. Foreign buying in caustic soda was along broad enough lines to lend the market a tone of increased stability. Moreover, domestic shipments were proceeding in substantial volume and makers were fully occupied. The pressure of offers in sulphide of soda which had been noticeable at Southern points for a number of weeks past persisted.

Production of the mineral acids was going on at a lively rate and domestic shipments of muriatic, nitric and sulphuric were running comparatively full. The producers of oxalic acid and caustic potash were also making substantial sized shipments to various consuming interests. The fall trade as a whole had opened under distinctly favorable auspices and brisk buying for autumn requirements was expected would show itself in the course of the next few weeks. There have been particularly good reports from the iron and steel trade, while an encouraging rate of improvement has been shown in the textile field.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
Antimony metal, ¼c. per lb.	Tin metallic, 1½c. per lb.
Soda chlorate, foreign, 1c. per lb.	Zinc ammonium chloride, ½c. per lb.
Silicofluoride, ⅜c. per lb.	
Tin bichloride, ¼c. per lb.	
crystals, ½c. per lb.	
anhydrous tetrachloride, ½c. per lb.	

Comparative Values

Index numbers compiled from twenty-five typical chemicals on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
155.7	155.7	155.6	162.2

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Alum.—Fair purchases were being arranged for the account of the textile and allied trades last week. The producers said shipments against contracts were running comparatively normal. The regular contract price structure had undergone no change.

Aluminum. — Quotations for the heavy hydrated were continued by producers at 6½c. to 8½c. per pound in barrels. The commercial sulphate was being maintained at $1.40 to $1.55 per 100 pounds in bags, and the iron free at $1.90 to $2.05 per 100 pounds in bags.

Ammonia, Anhydrous.—The sold-up condition of the market made for decided firmness in all quarters of the trade. The regular contract price basis was repeated at 13½c. to 14c. per pound in cylinders.

Ammonia Bicarbonate.—The car lot quotations stood at $6 per 100 pounds in barrels, whereas for less than car lots the quotations ranged from $6.25 to $6.50 per 100 pounds. The exports of ammonium compounds except ammonia sulphate in the first six months of this year totalled 1,522,609 pounds, compared with 2,109,345 pounds in the same time a year ago.

Ammonia Nitrate.—The imports of this product in the first six months of this year totalled 6,345,000 pounds as compared with 5,967,864 pounds in the same time a year ago.

Ammoniac, Sal.—Although there was only a moderate call for additional quantities the regular contract movement at basis of $4.70 per 100 pounds, car lots, casks for the white seemed to be showing a fair-sized increase. Quotations for the gray were repeated at $5.40 to $5.50 per 100 pounds for car lots.

Antimony Salts.—The metal showed an improvement of about ¼c. to ½c. per pound at 10¼c. to 10½c. per pound. The domestic producers continued to hold oxide for 13c. per pound. Holders of the foreign were asking 10c. to 10¼c. per pound c.i.f., which after computing the 2c. per pound import duty enabled them to offer at about 12c. per pound. Antimony powdered needle remained steady at 12c. per pound.

Arsenic.—The producers of white were securing a fair inquiry from the chemical trade. The insecticide trade was taking hold in a more limited manner though. Importations of white arsenic in the first six months of this year totalled 12,008,056 pounds, compared with 15,952,920 pounds in the corresponding period a year ago.

Barium Salts.—The shortage of barium chloride had evidently become more pronounced last week. About the only offers from abroad were those for future delivery. Some of the domestic producers reported sales in car lots at $62.70 per 100 pounds, whereas in less than car lots, sales were being arranged at prices ranging from $63 to $70 per ton. Importations of barium compounds in the first six months of the year totalled 9,931,074 pounds, as compared with 8,555,334 pounds in the same time last year.

Bleaching Powder.—The regular contract demand had not been as active as had been the case earlier in the year. Quotations remained on a basis of $2 to $2.35 per 100 pounds car lots works, drums and $2.15 to $2.60 per 100 pounds less than car lots, works drums. Exports during the first six months of this year were 12,678,328 pounds, compared with 8,182,015 pounds in the same time a year ago. In the first six months of this year we imported 1,616,376 pounds compared with 1,502,027 pounds in the same time a year ago.

Blue Vitriol.—The market had reverted to its normal position for this season of the year. September and October are usually the months of smallest consumption and the present lull in the market affords producers an opportunity of building up reserves for another season. Copper, the metal, was firmly maintained on the basis of 14¾c. per pound delivered to the Connecticut Valley, while export business was being arranged at 15c. per pound c.i.f. European ports. A sharp increase was noted in the volume of foreign buying of the metal. Another recent arrival from Germany included about 23,000 pounds at Boston. Exports of this product in the first six months of this year totalled 5,126,394 pounds, as compared with 2,791,536 pounds in the same time a year ago. Imports during the first six months of this year were 1,072,711 pounds, whereas in the same time a year ago, the total was 811,229 pounds.

Calcium Carbide.—The imports for the first six months of this year were

Current prices on industrial chemicals, formerly printed on pages 8 and 10, are now printed at the end of this market report.

Valuable information on Imports and Exports of Industrial Chemicals is given in port lists beginning on page 5.

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833,715 pounds, as compared with the huge total of 3,764,640 pounds in the same time a year ago.

Calcium Chloride.—Road renovating and dust laying purposes absorbed considerable quantities of this product. The manufacturers expressed themselves as well pleased with the general volume of business that was moving.

Chlorine.—The producers were adhering to last contract quotations of 3½c. per pound contracts, tanks, and 3¾c. per pound, prompt shipment, works.

Copperas.—Along with the less spotted condition of the textile industry there was reported to be a more generous volume of shipments of this chemical to consumers. The price situation had undergone no recent change.

Ethyl Acetate.—Active buying continued to feature this product at the higher prices which had recently been placed into effect. The producers were quoting 87c. per gallon in tanks, 89c. in drums, car lots, and 92c. per gallon in drums, less than car lots.

Fluorspar.—A fair volume of orders was coming into the market from glass makers. The enamelers' grade was being well maintained.

Glauber's Salt.—Additional substantial arrivals from Germany seemed to have a weakening influence, but producers had not actually changed their price views further. The silk divisions of the textile trade were giving a rather satisfactory account of themselves in the matter of new purchases.

Lime Acetate.—The producers were adhering strongly to their recently advanced price basis of $4.00 per 100 pounds in bags. Exports of this product in the first six months of this year totaled 7,710,938 pounds, as compared with 6,326,932 pounds in the same time a year ago.

Magnesite Calcined.—Arrivals from Germany and the United Kingdom have bulked fairly large during the past few weeks. The tone of the market has been quite well sustained all round, holders quoting $50 to $60 per ton in barrels.

Magnesium Chloride.—The cotton and woolen divisions of the textile industry as well as the ceramics industry were taking fair sized shipments of this chemical at the going quotations of $36 to $37 per ton in barrels at works. There was competition from the foreign product which could be had for about $4 per ton less. There were imported in the first six months of this year some 9,808,629 pounds, compared with 11,320,960 pounds in the same time a year ago.

Manganese Chloride.—While the ore was unchanged on the basis of 35c. to a unit, freer imports of the chloride from Germany and India was making for a slightly easier tone.

Niter Cake.—While producers had not changed their price views of $4.50 to $5.50 per ton in bulk some of them were beginning to express somewhat firmer views.

Potash Carbonate.—The importations ran full during the first six months of the year when the total was 8,796,106 pounds compared with 7,140,846 pounds in the same time a year ago. Recent additional receipts from Germany and Holland did not influence prices.

Potash Caustic.—Imports during the first six months of this year reached a total of 5,489,902 pounds, compared with 7,666,473 pounds in the corresponding period a year ago. About 84,000 pounds more came in from Germany within the past couple of weeks.

Potash Chlorate.—Holders of the foreign were reported to be strengthening their ideas, as producers abroad were said to be asking higher prices. The imports of chlorate and perchlorate of potash in the first six months of this year reached a total of 6,823,545 pounds, compared with 6,768,433 pounds in the same time a year ago.

Potash Cyanide.—The price basis was firmly maintained at 55c. to 60c. per pound. Imports during the first six months of this year totalled 58,830 pounds as against 59,540 pounds a year ago.

Potash Prussiate.—There had been no suggestion of any recent price change in this product. The producer's schedule called for 38c. to 40c. per pound for red, and 17½c. to 18½c. per pound for the yellow.

Potash Compounds.—Exports of potash compounds in the first six months of this year reached 15,707,268 pounds, whereas a year ago the total was only 1,266,666 pounds.

Saltpeter.—Imports of crude in the first six months of this year were 6,558 tons compared with 3,175 tons a year ago. The crystals were quoted at 7¼c. to 8c. per pound in barrels, the granular at 6c. to 6¼c. in barrels and the powdered at 7¼c. to 7½c. per pound in barrels.

Soda Acetate.—Moderate arrivals from Holland were a feature. The demand from the textile trade was rather limited, but quotations were maintained at 5½c. to 6c. per pound in barrels.

Soda Bicarbonate.—Producers continued to quote $2 per 100 pounds car lots barrels. Exports in the first six months of this year were 10,107,150 pounds, as compared with 9,080,767 pounds in the corresponding period of a year ago.

Soda Caustic.—Foreign buying during the first six months of the year was done in satisfactory volume, total shipments overseas having amounted to some 46,812,239 pounds, as compared with 52,901,198 pounds in the same period a year ago. The exports during the month of June reached a new record high figure for the year. A heavy domestic consumption continues in progress and the market is beginning to show a seasonal expansion in sales volume. Foreign business is being booked at $2.80 to $3.10 per 100 pounds f.a.s.

Soda Chlorate.—Foreign holders last week raised their ideas of prices to a basis of 7c. per pound ex dock, an advance of 1c. It was reported that business in small lots of the foreign had been done at as high as 7½c. to 8c. per pound. The domestic manufacturers had not changed their prices of 5¾c. to 6c. per pound, Seaboard basis, and were quoting 6¼c. to 6½c. per pound in kegs, works. They continued to secure a large volume of inquiry for the chemical from consumers who use it principally to kill weeds, such as wild morning glory.

Soda Cyanide.—Fair arrivals from the United Kingdom and France had not altered the conditions ruling in this item. Imports during the first six months of this year were 16,565,761 pounds, compared with 18,102,190 pounds in the same time a year ago. Exports during the first six months of this year were 820,199 pounds, whereas a year ago they were 639,896 pounds.

Soda Prussiate.—Imports of the yellow in the first six months of this year were 1,206,779 pounds, compared with 1,072,049 pounds in the same time a year ago.

Soda Sal.—Exports during the first six months of this year were 30,177,621 pounds compared with 26,850,367 pounds a year ago.

Soda Silicate.—Exports during the first six months of this year were 25,647,984 pounds contrasted with 23,877,740 pounds in the same time a year ago.

Soda Silicofluoride.—Coincident with the signing of the decree which provides for a higher import duty on this product to become effective within thirty days after date of signing, the domestic producers advanced their prices to a basis of 4¾c. per pound car lots, works, and 5c. per pound for less than car lot quantities. The duty will now be based on 37½ percent of the American valuation, which if figured on the basis of 5c. per pound, would work out to 1⅞c. per pound. Sales in lots of 15 to 20 barrels were being arranged in some quarters of the trade on the basis of 5⅛c. to 5⅜c. per pound.

Tin Salts.—Although metallic tin had declined to 56½c. per pound at the close of last week a loss of 1½c. per pound, the producers of the salts were basing their quotations on the higher levels which had recently ruled and were naming 14¾c. per pound for bichloride of tin, 37c. for tin crystals, and 31c. per pound for anhydrous tetrachloride of tin. Producers of tin oxide maintained their scheduled quotations at 53c. per pound in barrels. Exports of tin compounds in the first six months of this year reached a total of 334,938 pounds, whereas a year ago none were exported.

Zinc Ammonium Chloride.—The manufacturers were somewhat easier in their price views, quoting 5½c. per pound in casks. The exports of zinc compounds in the first six months of this year reached a total of 1,626,013 pounds. A year ago none were exported.

Acids

A brisk inquiry continued to feature the market for the general run of mineral acids from the bleaching, dyeing and steel industries with manufacturers reported to be making liberal shipments of nitric, sulphuric, and muriatic acids. There had been a free movement in evidence in oxalic acid throughout the hot weather months and this was continuing last week. Lactic acid was reported to be commanding a little more attention.

Comparative Values

Index numbers compiled from twelve typical acids on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
106.9	106.9	106.9	109.1

Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Acetic.—Steady conditions ruled in this acid last week. Acetic exports in the first six months of this year were 164,445 pounds, whereas a year ago none were exported.

Boric.—Producers were adhering to last contract prices. The volume of foreign and domestic business was holding up well. Exports in the first six months of this year were 1,923,580 pounds, while in the same time a year ago none were exported.

Citric.—Competition with the foreign was negligible. The market was substantially unchanged. Imports of citric acid in the first six months of this year amounted to but 31,690 pounds,

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compared with 108,304 pounds in the same time a year ago.

Formic.—Importations of formic acid in the first six months of this year were 1,151,230 pounds, compared with 1,786,786 pounds in the same time a year ago. Recently 13,000 pounds arrived from Germany.

Lactic.—The cleaning and dyeing trades have been taking hold in a fair way. Prices have not been quotably changed.

Muriatic.—Good shipments were the rule against outstanding contracts. Conditions generally appeared to be pointing towards increased activity with the resumption of various plants over the country.

Nitric.—A good outlet persisted for this acid. Consumption in the trades and industries was along liberal lines.

Oxalic.—Prices were stable. An active inquiry persisted. The imports of oxalic acid in the first six months of this year were 486,554 pounds, as compared with 1,130,064 pounds in the corresponding period of a year ago.

Phosphoric.—Inquiry for technical grades continued along active lines. Prices were firm.

Sulphuric.—A liberal sales volume continued and like all mineral acids the tone was quite firm. Imports in the first six months of this year amounted to 10,592,130 pounds as compared with 19,397,232 pounds in the corresponding period of a year ago. Exports in the first six months of this year were 3,957,638 pounds, whereas 4,306,717 pounds were exported in the same time a year ago.

BALTIMORE, Sept. 6.—Producers of sulphuric acid here report a fair measure of activity, even though this is not the season of the year when the manufacturers of mixtures find themselves with a lot of business on hand and there is no special incentive for them to make liberal purchases of crude stocks. The state of the trade is indicated by the erection of new units and the expansion in the acid production capacity, which suggests a satisfactory state of things at present, with confidence in the future. Quotations on pyrites acid are given at $10.50 per ton for 60 degree Baume, $15 for 66 degree stocks and $17.50 for 98 degree supplies. On brimstone acid the figures mentioned are $11.50 for 60 degree Baume, $16 for 66 degree, $18.50 for 98 percent, and $21 for 20 percent.

Tartaric.—The imports of tartaric acid in the first six months of this year reached a total of 714,296 pounds, as compared with 1,637,318 pounds a year ago. The imports of argols or wine lees in the first six months of this year were 4,939,214 pounds, as compared with 8,881,163 pounds a year ago.

Insecticides

The season in a majority of these products had about run its course and manufacturers were naturally anxious to dispose of such surplus lots as remained. The volume of trading in the cotton market has been restricted because of the desire to see what the Government estimates on the crop will be. A number of crop estimates came out in advance of the Government's report and the average of some fifteen of these from private agencies placed the crop at something under 14,500,000 bales. The estimates have ranged from 13 600,000 bales to 15,500,000 bales. No one was willing to prophesy whether additional quantities of calcium arsenate would be required during the balance of the season, but it was held that since the search had been rather disappointing to date, there would be no difficulty in securing the stock.

Bordeaux Mixture.—The market remained steady at 10½c. to 11½c. per pound in barrels.

Calcium Arsenate.—While surplus lots were said to be available, at some concession from contract levels, none of the producers had changed their prices to date. We exported 597,132 pounds during the first six months of this year, whereas in the same time last year none were exported.

Copper Carbonate.—Supplies were going forward to Northwestern wheat growers. The total movement of the past few weeks had been broad enough to absorb considerable quantities of stock. The West had been pretty well supplied. Eastern wheat growers, particularly those in Pennsylvania, were taking stocks.

Lead Arsenate.—Exports in the first six months of this year totalled 698,553 pounds. There were no exports during this period last year.

Nicotine.—Exports of sulphate in the first six months of this year reached a total of 78,827 pounds, whereas a year ago none were exported.

Current Prices

(For late price changes, see page 2)

Aldehyde ammonia, drums	lb.	.65 @	.70
Alum, ammonia, burnt, U.S.P., barrels	lb.	.18 @	
ground, barrels	100 lbs.	3.35 @	3.45
lump, barrels	100 lbs.	3.25 @	3.35
powder, barrels	100 lbs.	3.65 @	—
ammonia-chrome, barrels	lb.	.05¼@	.05¼
potash, ground, barrels	100 lbs.	3.10 @	3.20
lump, barrels	100 lbs.	3.00 @	3.10
powder, barrels	100 lbs.	3.40 @	—
potash-chrome, barrels	lb.	.04½@	.05
soda, barrels	lb.	.03½@	.04¼
Aluminum, 98@99 p.c., virgin	lb.	.2430@	—
hydrate, heavy, barrels	lb.	.08½@	.08½
light, barrels	lb.	.16 @	.17
sulphate, commercial, works, bags	100 lbs.	1.40 @	1.55
iron free, works, bags	100 lbs.	1.90 @	2.05
Ammonia, anhydrous, cylinders	lb.	.13½@	.14
aqua, 26 deg., carboys	lb.	.05¼@	—
drums, car lots	lb.	.03 @	.03¼
less than car lots	lb.	.03¼@	.03½
tanks	lb.	.02½@	.02¾
bicarbonate, car lots, barrels, contracts	100 lbs.	6.00 @	—
less car lots, barrels, contracts	100 lbs.	6.25 @	—
shipment	100 lbs.	6.50 @	—
bifluoride, barrels	lb.	.21 @	.22
carbonate, domestic, barrels	lb.	.12 @	.13
imported, casks	lb.	.08 @	.10
chloride (see ammoniac, sal),			
fluoride, barrels	lb.	.19 @	.21
nitrate, technical, casks	lb.	.06 @	.12
persulphate, cases	lb.	.27 @	.30
phosphate, technical, barrels	lb.	.12½@	—
sulphocyanide, kegs	lb.	.36 @	.48
Ammoniac, sal, gray, domestic, car lots, barrels	100 lbs.	5.40 @	5.50
less car lots, barrels	100 lbs.	5.90 @	6.50
imported, casks	lb.	.05½@	.06
lump, imported, barrels	lb.	.10½@	.11
white, domestic, granular, casks, car lots, contracts, works	100 lbs.	4.70 @	—
imported, casks	100 lbs.	4.70 @	5.00
Antimony chloride solution (butter of), domestic, carboys	lb.	.17 @	.18
imported, carboys	lb.	.14½@	—
metal, bulk	lb.	.10¼@	.10½
needle powdered, barrels	lb.	.12 @	—
oxide, barrels	lb.	.12 @	.13
sulphuret, golden, barrels	lb.	.16 @	.20
vermilion, barrels	lb.	.38 @	.42
Argols, crude, 30 p.c., casks	lb.	.09½@	.10
80 percent, casks	lb.	.18 @	—
Arsenic metal, cases	lb.	.50 @	.55
red, kegs	lb.	.09½@	.10
white, powdered, kegs	lb.	.04 @	.05
Barium carbonate, domestic, bags	ton.	57.50 @	60.00
imported, bags	ton.	60.00 @	68.50
chloride, crystals, domestic, barrels or bags	ton.	60.00 @	70.00
imported, bags	ton.	63.00 @	70.00
dioxide, imported, drums	lb.		
fluoride, barrels	lb.	.12 @	.20
hydrate, barrels	lb.	.04¾@	—
Bleaching powder, car lots, works, drums	100 lbs.	2.00 @	2.35
less car lots, works, drums	100 lbs.	2.15 @	2.60
Blue vitriol, 99 p.c., crystals, car lots, barrels	100 lbs.	5.30 @	5.40
less car lots, barrels	100 lbs.	5.85 @	6.00
Brimstone (see sulphur).			
Cadmium sulphide, boxes	lb.	.75 @	.85
Calcium carbide, drums	lb.	.05 @	.06
chloride, flake, domestic, 77 to 80 p.c., bags	100 lbs.	1.94 @	2.09
drums	100 lbs.	1.94 @	2.09
car lots, works	ton.	25.00 @	—
imported, 75 p.c.	ton.	23.00 @	24.00
solid, domestic, drums, 74 to 75 p.c.	100 lbs.	1.69 @	1.84
car lots, works, drums,	ton	20.00 @	—
solid, imported shipments, drums	ton.	18.50 @	20.00
hydrate, works, bags	ton.	11.50 @	12.00
barrels	100 lbs.	.60 @	.85
phosphate, barrels	lb.	.07 @	.08
Carbon bisulphide, drums	lb.	.05 @	.06
dioxide, cylinders	lb.	.06 @	.08
tetrachloride, car lots, drms.	lb.	.06¼@	.06½
less car lots, drums	lb.	.06½@	.07
Chlorine, liquid, car lots, works, cylinders	lb.	.05¾@	—
contracts, cyls	lb.	.05½@	
less car lots, works, cyls	lb.	.08¼@	.09¼
contracts, cyls	lb.	.08 @	.09
tanks, works, prompt	lb.	.03¾@	—
contracts, tanks	lb.	.03½@	—
Chloropicrin, commercial, cylinders, works	lb.	1.00 @	1.35
Chrome acetate, 8 p.c. chrome, barrels	lb.	.04¾@	.05¼
Copper, electrolytic	lb.	.14¾@	—
carbonate (see Agricultural Insecticides.)			
chloride, barrels	lb.	.19 @	.25
cyanide, technical, barrels	lb.	.51 @	.52
oxide, black, kegs	lb.	.20 @	.25
sulphate (see blue vitriol).			
Copperas, car lots, works, bags,	ton.	16.00 @	—
barrels	ton.	18.00 @	—
bulk	ton.	13.00 @	—
Diorthotoluolguanidin, drums	lb.	.48 @	.49
Diphenylguanidin, drums	lb.	.40 @	.41
Ethyl acetate, tanks	gal.	.87 @	—
car lots, drums	gal.	.89 @	—
less car lots, drums	gal.	.92 @	—
bromide, technical, drums	lb.	.50 @	.55
Ethylene dichloride, drums	lb.	.07 @	.10
Ferric chloride, cryst., barrels	lb.	.04½@	.07
Fluorspar, domestic, acid grade, lump, car lots, bulk, works	ton.	39.00 @	—
enameler's, 96 to 98 p.c., bags	ton.	37.50 @	40.00
ground, car lots, bulk, works	ton.	43.50 @	—
No. 1 standard ground, works	ton.	32.50 @	—
No. 2 lump, works	ton.	18.00 @	—
washed gravel, 85 and 5, bulk, works	ton.	17.00 @	—
ground, bags, works	ton.	31.00 @	31.50
imported, 85 and 5, ground, bulk	ton.	17.50 @	—
Formaldehyde anilin, drums	lb.	.31 @	.35½
Glauber's salt, domestic, car lots, bags	100 lbs.	1.00 @	—
less car lots, bags	100 lbs.	1.15 @	1.60
barrels	100 lbs.	1.20 @	1.65
imported	100 lbs.	.70 @	.80
anhydrous, domestic	lb.	.03 @	.03½
foreign	lb.	.02¼@	.02¾
Iron nitrate, com'l, kegs	lb.	.02¾@	.03
true, kegs	lb.	.09 @	.09¼

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"AUNTY FREEZ" is guaranteed 188 proof Denatured Alcohol. Distilled and denatured under government supervision. Packages in convenient one-gallon sealed lithographed tins, with pouring spout (10 tins to a wooden case), 53 gallon drums and 8000 gal. tank cars. Of the highest strength . . . therefore economical.

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709 Sixth Avenue New York, N. Y.

Sales Agents for

SYRUP PRODUCTS COMPANY, INC., Yonkers, N. Y.

Lead, acetate, brown, broken, barrels	lb.	.12 @	.12½
white, broken, barrels	lb.	.13½@	.14
crystals, barrels	lb.	.13 @	.13½
granular, barrels	lb.	.13½@	.14
powdered	lb.	.14 @	.14½
arsenate (see Agricultural Insecticides.)			
nitrate, barrels	lb.	.13 @	—
sulphate, barrels, works	lb.	.08¼@	—
Lime, lump, works, barrels	bbl.	1.80 @	2.80
bulk	ton	6.50 @	
acetate, bags	100 lbs.	4.00 @	—
Magnesite, calcined, barrels	ton.	50.00 @	60.00
Magnesium chloride, flake, domestic, works, barrels	ton.	36.00 @	67.00
imported, barrels	ton.	31.75 @	33.50
carbonate, technical, bags	lb.	.06 @	.06½
silicofluoride, barrels	lb.	.09¾@	.10¼
stearate, barrels	lb.	.22 @	.23
Manganese chloride, imported, barrels	lb.	.08 @	.09
dioxide, technical (peroxide), drums	lb.	.04½@	.06
sulphate, works, barrels	lb.	.07¾@	.08½
Methyl chloride, cylinders	lb.	.45 @	—
Nickel chloride, barrels	lb.	.16 @	.19
kegs	lb.	.18 @	.19
oxide, barrels	lb.	.38 @	.40
salts, double, barrels	lb.	.10 @	—
single, bbls	lb.	.10½@	—
Niter cake, works, bulk	ton.	4.50 @	5.50
Phosphorus oxychloride, cylinders	lb.	.35 @	.40
red, casks	lb.	.55 @	.60
sesquisulphide, cases	lb.	.44 @	—
trichloride, cylinders	lb.	.35 @	—
yellow, casks	lb.	.35 @	.40
Potash bichromate (see Dyestuffs and Tanstuffs.)			
binoxalate, drums	lb.	.14 @	.22
bisulphate, kegs	lb.	.30 @	—
carbonate 98@100 p.c., calcined, imported, shipm't, cks	lb.	.07¾@	.08¼
96@98 p.c., calcined, imported, shipment, casks	lb.	.06¾@	.07¼
80@85 p.c., calcined, imported, casks	lb.	.05¾@	.05¾
hydrated, imported, shipment, casks	lb.	.06 @	.06½
caustic, 88@92 p.c., domestic, works, casks	lb.	.07¼@	.07¾
imported, casks	lb.	.07½@	.07¾
flake, 88@92 p.c., domestic, works, casks	100 lbs.	8.05 @	8.30
chlorate, domestic, works, car lots, casks	lb.	.06½@	.07
less than car lots, casks	lb.	.08½@	.09
foreign, car lots, casks	lb.	.07½@	.07¾
chloride, crystals, barrels	lb.	.05¼@	.05½
chromate, kegs	lb.	.27 @	.28
cyanide, cases	lb.	.55 @	.60
metabisulphite, bbls	lb.	.10 @	.12
nitrate (see saltpeter).			
oxalate, barrels	lb.	.16 @	.20
perchlorate, works, casks	lb.	.11 @	.11½
permanganate, tech., casks	lb.	.15 @	.16
prussiate, red, casks	lb.	.38 @	.40
yellow, casks	lb.	.17½@	.18½
sorts, casks	lb.	.08½@	.09
titanium oxalate, kegs	lb.	.23 @	.25
xanthate, tanks	lb.	.12 @	—
car lots, drums	lb.	.14 @	—
Salt cake, ground, w'k's, bbls.	ton.	21.00	@23.00
bulk	ton.	10.00	@17.00
Saltpeter, crystal, barrels	lb.	.07¼@	.08
granular, barrels	lb.	.06 @	.06¼
powder, barrels	lb.	.07¼@	.07½
Soda, acetate, barrels	lb.	.05½@	.06
ash, dense, 58 p.c., car lots, bags	100 lbs.	1.42½@	—
barrels	100 lbs.	1.60 @	—
less car lots, bags	100 lbs.	2.30 @	2.50
barrels	100 lbs.	2.50 @	2.70
contracts, car lots, works, bags	100 lbs.	1.37½@	—
barrels	100 lbs.	1.55 @	—
bulk, shipment	100 lbs.	1.22½@	—
light, 58 p.c., car lots, bags,	100 lbs.	1.37 @	—
barrels	100 lbs.	1.60 @	—
less car lots, bags	100 lbs.	2.04 @	2.19
barrels	100 lbs.	2.29 @	2.44
contracts, car lots, works, bags	100 lbs.	1.32 @	—
barrels	100 lbs.	1.55 @	—
bulk shipment	100 lbs.	1.15 @	—
bicarbonate, car lots, barrels,	100 lbs.	2.25 @	—
kegs	100 lbs.	2.55 @	—
works, barrels	100 lbs.	2.00 @	—
kegs	100 lbs.	2.25 @	—
bisulphate, works, barrels	ton.	5.00 @	6.00
bulk	ton.	3.50 @	4.50
bisulphite, powdered, works, barrels	100 lbs.	3.75 @	4.25
solution, 35-38 p.c., works, barrels	100 lbs.	1.50 @	1.75
caustic, 60 p.c., contracts, works, drums	100 lbs.	2.50 @	—
76 p.c., flake, car lots, drums	100 lbs.	3.35 @	—
less car lots, drums	100 lbs.	4.16 @	4.31
contracts, car lots, works, drums	100 lbs.	3.30 @	—
ground, car lots, drums	100 lbs.	3.35 @	—
caustic, 76 p.c., ground, less car lots, drums	100 lbs.	4.16 @	4.31
contracts, car lots, works, drums	100 lbs.	3.30 @	—
solid, car lots, drums	100 lbs.	2.95 @	—
less car lots, drums	100 lbs.	3.76 @	3.91
contracts, car lots, works, drums	100 lbs.	2.90 @	—
export, drums	100 lbs.	2.80 @	3.10
chlorate, seaboard, kegs	lb.	.05¾@	.06
works, kegs	lb.	.06¾@	.06⅞
foreign, ex dock	lb.	.07 @	—
cyanide, 96@98 p.c., domestic, 100-lb. drums	lb.	.18 @	.19
imported, cases	lb.	.17 @	.18
fluoride, barrels	lb.	.08½@	.10
hydrosulphide, barrels	lb.	.26 @	.28
monohydrate, barrels	100 lbs.	2.60 @	—
works, barrels	100 lbs.	2.30 @	—
naphthionate	lb.	.52 @	.54
nitrate, crude (see Fertilizer Materials.)			
refined, granular, barrels	lb.	.03¾@	.04½
powder, barrels	lb.	.05¾@	.06
nitrite, 96@98 p.c., domestic, barrels	lb.	.07¼@	.08
imported, casks	lb.	.08½@	.08¾
perborate, barrels	lb.	.18 @	—
phosphate, dibasic, barrels	lb.	.03¼@	.03¾
tribasic, barrels	lb.	.039 @	.04½
prussiate, yellow, works, cks	lb.	.11 @	.12
pyrophosphate, barrels	lb.	.15 @	.24
sal, barrels	100 lbs.	1.15 @	—
works, barrels	100 lbs.	1.00 @	—
silicate, 40 deg., works, drums,	100 lbs.	.75 @	.80
tanks	100 lbs.	.65 @	70
60-deg., works, drums	100 lbs.	1.65 @	—
silcofluoride, barrels	lb.	.04¾@	.05¾
stannate, drums	lb.	.39½@	.41
stearate, barrels	lb.	.20 @	.29
sulphide, 30 p.c., crystals, barrels, works	100 lbs.	2.35 @	2.65
foreign	100 lbs.	2.10 @	2.25
60 p.c., broken, casks	100 lbs.	3.25 @	3.75
foreign	100 lbs.	3.25 @	3.50
sulphite, crystals, barrels	lb.	.03 @	.03¼
powdered, barrels	lb.	.06¾@	.07
sulphocyanide, cases	lb.	.29 @	.37
tungstate, tech., cryst., kegs	lb.	.65 @	.78

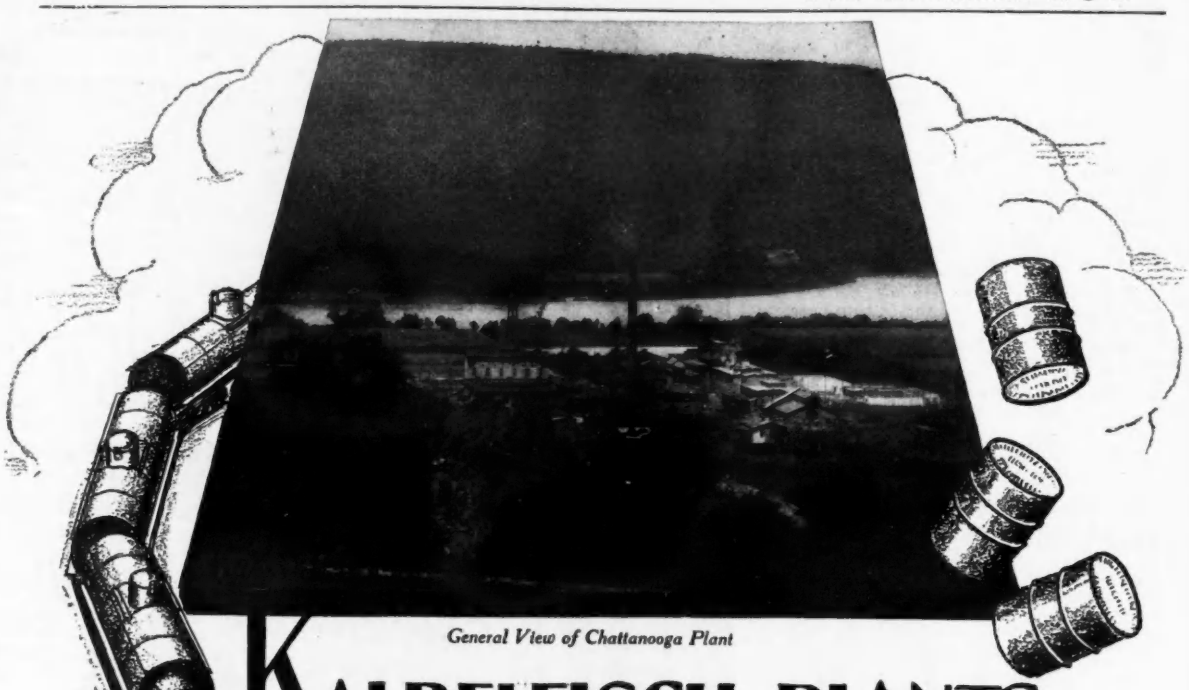
Sulphur chloride, tanks, works	lb.	.03½@	.04
drums	lb.	.05 @	.07
dioxide, anhydrous, works, tanks	lb.	.04 @	—
car lots, drums	lb.	.04½@	—
cylinders	lb.	.05 @	—
less car lots, cylinders	lb.	.06½@	.08
crude, car lots, mines, bulk	ton.	18.00	@19.00
ex vessel, Atlantic ports, bulk	ton.	22.00	@23.00
roll, bags	100 lbs.	2.25 @	2.70
barrels	100 lbs.	2.40 @	2.85
flour, commercial, bags	100 lbs.	1.55 @	2.10
barrels	100 lbs.	1.90 @	2.45
extra fine, bags	100 lbs.	2.40 @	3.00
superfine, bags	100 lbs.	2.40 @	2.80
barrels	100 lbs.	2.55 @	3.10
rubbermakers', bags	100 lbs.	2.20 @	2.80
barrels	100 lbs.	2.55 @	3.10
refined, extra fine, bags	100 lbs.	2.80 @	3.35
barrels	100 lbs.	3.15 @	3.70
heavy, bags	100 lbs.	2.50 @	3.05
barrels	100 lbs.	2.85 @	3.40
light, bags	100 lbs.	2.60 @	3.15
barrels	100 lbs.	2.95 @	3.50
rubbermakers', bags	100 lbs.	2.60 @	3.15
barrels	100 lbs.	2.95 @	3.50
Tin	lb.	.46½@	—
bichloride, barrels	lb.	.14¾@	—
crystals, barrels	lb.	.37 @	—
oxide, barrels	lb.	.53 @	—
tetrachloride, anhydrous	lb.	.31 @	—
Triphenylguanidin, drums	lb.	.67 @	—
Uranium oxide	lb.	1.50 @	—
Urea, cases	lb.	.20 @	.30
Zinc carbonate, barrels	lb.	.10 @	.11
chloride, fused, works, drums,	lb.	.05¼@	.06
granular, domestic, works, drums	lb.	.06½@	.06¾
solution, works, drums	lb.	.02¾@	.03¼
cyanide, drums	lb.	.40 @	.46
dust, car lots, barrels	lb.	.08¾@	.09
barrels	lb.	.09¾@	.11
fluoride, barrels	lb.	.15 @	.20

Zinc sulphate, barrels	lb.	.03½@	.03¾
sulphide, barrels	lb.	.30 @	.32
Zinc-ammonium chloride, cks	lb.	.05½@	—
Zirconium oxide, natural, kegs	lb.	.02½@	.03
pure, kegs	lb.	.45 @	.50
semi-refined, kegs	lb.	.08 @	.10

Acids

Acetic, com'l., 28 p.c., barrels,	100 lbs.	3.63 @	3.88
carboys	100 lbs.	4.13 @	4.38
30 p.c., barrels	100 lbs.	4.92 @	5.17
carboys	100 lbs.	5.42 @	5.67
56 p.c., barrels	100 lbs.	6.85 @	7.10
carboys	100 lbs.	7.35 @	7.60
60 p.c., barrels	100 lbs.	7.30 @	7.55
carboys	100 lbs.	7.80 @	8.05
70 p.c., barrels	100 lbs.	8.44 @	8.69
carboys	100 lbs.	8.94 @	9.19
80 p.c., barrels	100 lbs.	9.62 @	9.87
carboys	100 lbs.	10.12 @	10.37
84 p.c., barrels	100 lbs.	10.18 @	10.33
carboys	100 lbs.	10.58 @	10.83
Acetic, glacial, U.S.P., 99 p.c., barrels	100 lbs.	12.79 @	13.04
carboys	100 lbs.	13.30 @	13.55
pure, 60 p.c., barrels	100 lbs.	8.65 @	8.90
carboys	100 lbs.	9.15 @	9.40
80 p.c., barrels	100 lbs.	11.41 @	11.66
carboys	100 lbs.	11.91 @	12.16
redistilled, 28 p.c., barrels	100 lbs.	3.91 @	4.16
carboys	100 lbs.	4.41 @	4.66
56 p.c., barrels	100 lbs.	7.40 @	7.65
carboys	100 lbs.	7.90 @	8.15
60 p.c., barrels	100 lbs.	7.90 @	8.15
carboys	100 lbs.	8.40 @	8.65
70 p.c., barrels	100 lbs.	9.14 @	9.39
carboys	100 lbs.	9.64 @	9.89
80 p.c., barrels	100 lbs.	10.41 @	10.66
carboys	100 lbs.	10.91 @	11.16
Acetic anhydride, drums	lb.	.28 @	.29
Battery, carboys	100 lbs.	1.60 @	3.00
Benzoic (see Coaltar Products).			

Boric, 99½ p.c., car lots, sacks.	lb.	.06½@	.07
car lots, barrels	lb.	.07¼@	.08¼
5 tons, sacks	lb.	.08¼@	—
barrels	lb.	.08½@	—
less than 5 tons, sacks	lb.	.07¾@	.08½
barrels	lb.	.08 @	.08¾
kegs	lb.	.08½@	—
Butyric, 100 p.c. basis, cbys	lb.	.85 @	.90
Camphoric, cans	lb.	4.85 @	—
Carbolic (see Coaltar Products-phenol).			
Chromic, 99 p.c., drums extra	lb.	.21 @	.28
Cinnamic, refined, bottles	lb.	3.25 @	3.50
Citric, domestic, crystals, barrels	lb.	.46 @	—
powder, barrels	lb.	.47 @	—
imported, kegs	lb.	.59 @	.60
Cresylic (see Coaltar Products).			
Formic, 90 p.c., imported, carboys	lb.	.11 @	.12
Gallic, technical, barrels	lb.	.50 @	.55
U.S.P., barrels	lb.	.74 @	—
Hydriodic, U.S.P., 10 p.c. solution, carboys	lb.	.67 @	—
Hydrobromic, U.S.P., 10 p.c. solution, carboys	lb.	.19 @	—
Hydrochloric (see muriatic).			
Hydrocyanic, works, cylinders	lb.	.80 @	1.00
Hydrofluoric, 30 p.c., barrels	lb.	.06 @	.06½
lead carboys	lb.	.08 @	.08½
48 p.c., lead carboys	lb.	.10 @	.10½
52 p.c., lead carboys	lb.	.11 @	.11½
60 p.c., lead carboys	lb.	.13 @	.13½
Hydrofluosilicic, 35 p.c., barrels,	lb.	.11 @	.12
Hypophosphorus, 30 p.c., U.S.P., demijohns	lb.	.85 @	—
Lactic, 22 p.c., dark, barrels	lb.	.04¾@	.05¼
light, barrels	lb.	.05¾@	.06¼
44 p.c., dark, barrels	lb.	.10 @	.10½
light, refined, barrels	lb.	.12 @	.12½
U.S.P., X, carboys	lb.	.62 @	.64
Malic, powd., kegs	lb.	.48 @	.60
Mixed, tanks nitric unit	lb.	.07 @	.07¼
sulphuric unit	lb.	.008 @	.01
Monochloracetic, technical, barrels	lb.	.18 @	.21
99 p.c., barrels	lb.	.25 @	.27



General View of Chattanooga Plant

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Muriatic, 18 deg., tanks, works, 100 lbs.	1.00	@	—
carboys, car lots, works..... 100 lbs.	1.35	@	—
truckloads, del'd....100 lbs.	1.60	@	—
20 deg., tanks, works..100 lbs.	1.10	@	—
carboys, car lots, works..... 100 lbs.	1.45	@	—
truckloads, del'd....100 lbs.	1.70	@	—
22 deg., tanks, works...100 lbs.	1.60	@	—
carboys, car lots, works..... 100 lbs.	1.95	@	—
truckloads, del'd....100 lbs.	2.20	@	—
chemically pure, carboye....lb.	.07	@	—
5-pt. bottles.....lb.	.09	@	—
Nitric, 36 deg., carboys, car lots, works .....100 lbs.	5.00	@	—
carboys, truck lots, del'd.... 100 lbs.	5.25	@	—
38 deg., carboys, car lots, works .....100 lbs.	5.50	@	—
truckloads, del'd....100 lbs.	5.75	@	—
40 deg., carboys, car lots, works .....100 lbs.	6.00	@	—
40 deg., carboys, truck loads, del'd .....100 lbs.	6.25	@	—
100 lbs.	6.50	@	—
42 deg., carboys, car lots, works, truckloads, del'd.. 100 lbs.	6.75	@	—
chemically pure, carboys....lb.	.12	@	—
5-pt. bottles.....lb.	.14	@	—
Oleic (see Miscellaneous Oils—red oil).			
Oleum (see fuming sulphuric).			
Oxalic, domestic, barrels.....lb.	.11	@	.11¼
imported, barrels.....lb.	.11⅞	@	.12⅛
Picric (see Coaltar Products).			
Phosphoric, 50 p.c., technical, carboys, barrels.....lb.	.08½	@	.09
85 p.c., syrupy, U.S.P. (spec. grav. 1.710), carboys.....lb.	.14	@	.15
89 p.c. (spec. grav. 1.750), carboys .....lb.	.15	@	.16
Phthalic anhydride (see Coaltar Products).			
Pyrogallic, crystals, cans....lb.	1.30	@	1.40
resublimed, cans.....lb.	1.60	@	1.70
Salicylic (see Coaltar Products).			
Stearic (see Miscellaneous Oils).			
Sulphuric, 60 deg., tanks, works, ton.	11.00	@	—
66 deg., tanks, works....ton.	15.50	@	—
carboys, car lots, works..... 100 lbs.	1.35	@	—
truckloads, del'd....100 lbs.	1.60	@	—
98 percent, tanks, works.ton.	16.50	@	—
chemically pure, carboys....lb.	.07	@	—
5-pt. bottles.....lb.	.09	@	—
fuming (oleum), 20 percent, tanks, works.....ton.	18.50	@	—
Tannic, technical, barrels....lb.	.35	@	.40
U.S.P., fluffy, barrels.....lb.	.87	@	.93
Tartaric, U.S.P., domestic, crystals or powder, barrels..lb.	.38	@	—
fiber, drums.....lb.	.39	@	—
kegs .....lb.	.38½	@	—
imported, crystals, kegs.....lb.	.38	@	—
Trichloracetic, bottles.....lb.	2.75	@	—
kegs .....lb.	2.00	@	—
Tungstic, barrels.....lb.	1.00	@	1.25

Insecticides, Fungicides

Arsenic, white, powder (see above).			
Bordeaux mixture, paste, bbls.lb.	.10½	@	.11⅛
powder, barrels .....lb.	.10½	@	.11⅛
Calcium arsenate, drums.....lb.	.06	@	.07
Carbon bisulphide (see above).			
Copper carbonate, barrels....lb.	.17	@	.17½
Formaldehyde (see Drugs and Fine Chemicals).			
Lead arsenate, powder, drums.. lb.	.13½	@	.15
Lime-sulphur solution, barrels, gal.	.15	@	.16
Nicotine, 95 p.c., tins.....lb.	3.25	@	—
sulphate, 10-lb. tins.....tin	9.85	@	—
Paradichlorobenzene, kegs....lb.	.17	@	.25
Paris green, bulk.....lb.	.23	@	.35
Soda, arsenate, drums.....lb.	.18	@	.19
arsenite, drums.....gal.	1.00	@	1.50

Potash Liquor Freight Reduced in New York

ALBANY, Sept. 4, 1928.

The Public Service Commission has approved reduced freight rates of the New York Central (East) from Solvay and Syracuse and of the West Shore Railroad from Syracuse, on potash (caustic liquor), carload, minimum weight 50,000 pounds, and in tankcars, carload, to stations on New York, New Haven & Hartford Railroad, as follows: State Line, Copake to Fraleighs Switch inclusive, Ancram Lead Mines to Van Wagners inclusive, Arlington Siding to Fishkill Plains inclusive, Hopewell to Brewster inclusive, and Shekomeko to Groveville Siding inclusive, 25 cents per hundredweight; effective October 1.

Phenanthrene Is Duty Free

Phenanthrene is an unspecified coaltar product under the tariff act of 1922, according to the Bureau of Customs, and, therefore, is entitled to free importation under paragraph 1549. Such classification has been ordered by the bureau in a communication originally sent to the appraiser at Philadelphia.

In holding phenanthrene free of duty, the Bureau of Customs supports the position taken by the appraiser at New York. The appraiser at Philadelphia had been classifying the article as dutiable under paragraph 27 because of its similarity to anthracene. The appraiser at New York had held that phenanthrene was not used in such a way as to make it competitive with anthracene or comparable with the latter in a tariff sense.

British Dye Imports

WASHINGTON, Sept. 5, 1928.

British imports of dyes and dyestuffs and intermediate coaltar products used in the manufacture of dyes (including anilin oil and phenylglycin) during the first six months of 1928, according to information sent to the Department of Commerce from the consulate-general at London, compared with the corresponding period of 1927 as follows:—

	1927 Cwt.	1927 Value.	1928 Cwt.	1928 Value.
Alizarin	551	£21,435	377	£12,062
Indigo, synthetic ...	40	274	...	...
Other coal tar.	19,865	495,269	19,976	480,471
Intermediate coal-tar products	30	755	583	5,340

W. P. Pickhardt, president of Kuttruff, Pickhardt & Co., Inc., this city, left last week for a six weeks' tour of the country. He is combining pleasure with business by visiting friends in the chemical and related lines.

Bids and Awards

Bids Wanted

Gasoline

Chicago Q. M. Circular 56

Bids are wanted September 13, circular 56, by the commanding officer, Q. M. depot, Chicago, for 13,000 gallons gasoline, motor.

Hexachlorethane

Edgewood Arsenal Circular 31

Bids are wanted September 14, circular 31, by the chemical warfare service, Edgewood Arsenal, Md., for 1,776 pounds hexachlorethane.

White Lead

Rock Island Arsenal Circular 47

Bids are wanted September 11, circular 47, by the commanding officer, Rock Island Arsenal, Ill., for 6,000 pounds white lead in oil.

Contracts Awarded

Annealing Oil

Frankford Arsenal Circular 62

Sun Oil Company, Philadelphia, 8,000 gallons annealing oil, 6c. gallon.

Frankford Arsenal Circular 46

Sun Oil Company, 8,000 gallons annealing oil, 6c. gallon.

Gasoline

Brooklyn Q. M. Circular 30

American Oil Company, 28,000 gallons gasoline, 11.93c. gallon.

Gilding Metal

Frankford Arsenal Circular 42

Scovill Mfg. Co., Waterbury, Conn., 200,000 lbs. gilding metal, 6.46c. lb.

Lard Oil

Springfield Arsenal Circular 25

Ray-Mount Products Company, 10,000 gallons lard oil, 80.89c. gallon.

Naphthalene

Fort Sam Houston Circular 48

San Antonio Drug Company, 13,754 pounds flake naphthalene, 6.75c. pound.

Paint

Brooklyn Q. M. Circular

Smyth Bros., 900 gallons olive drab paint, $1.24 gallon.

Radium Paint

Philadelphia Aircraft Factory

Radium Dial Company, 200 gms. radium paint, $5.40 gm.

Red Lead

U. S. Engineer, Rock Island

E. I. duPont de Nemours & Co., 7,000 pounds red lead, $798.

Soap

Fort Sam Houston Circular 48

C. A. B. Chemical Company, 40,000 pounds saddle soap, 10.1c. pound.

Armour & Co., 28,000 cakes castile soap, 13c. pound.

Strontium Peroxide

Frankford Arsenal Circular 36

Barium Reduction Company, Charlestown, 1,200 pounds strontium peroxide, 80 percent pure, $1.50 pound; 85 percent, $2; 90 percent, $2.25.

Sulphur

Treasury Circular 217

Battelle & Renwick, 20,000 lbs. roll sulphur, $2.50 cwt.

White Lead

U. S. Engineer, Rock Island

National Lead Company, 6,000 pounds white lead, $630.60.

White Paint

Brooklyn Medical Circular 101

Sherwin-Williams Co., 500 cans white paint, $1.51 can.

District of Columbia

Scientific Production Co., 1,000 gals. white paint, $1.20 gal.

Waterproofing Compound

Frankford Arsenal Circular 40

Valentine & Co., 100 gallons waterproofing compound, $4.90 gallon.

Mexico Makes Petroleum Industry a Public Utility

The petroleum industry in Mexico will henceforth be regarded by the government of that country as a public utility. In announcing this policy, the Secretary of Industry, Commerce and Labor, Dr. Jose Manuel Puig-Casaurane, stated September 5 that every facility would be made available to the petroleum companies to carry on their operations. He said that technical details would not be made an excuse for holding up applications for permits, and that questions of the legality of all documents in connection with concessions would be left to the courts to determine. Prompt action will be sought, he said, in all cases.

Full right of appeal from the decisions of his department will be extended freely to petroleum operators the secretary said, and action of this sort will not be looked upon as hostile.

J. S. Hoagland, formerly with the Industrial Petroleum Corporation, Chicago, and prior to that in charge of the Union Petroleum Company's Chicago office, has been appointed special representative of the Fred G. Clark Company in lubricating oil sales to dealers in the Central territory.

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(Continued from page 17)

tion of research specially directed to the improvement of industry.

It may not be entirely inopportune briefly to consider the position of industrial research and its bearing on the future development of applied chemistry.

Research Associations

Let me first refer to the work of the British government in encouraging research in chemical industry. This naturally constitutes a very small part of our national scheme of research which, as in America, now enters into every section of state activity and provides a valuable contribution to the whole field of scientific research in Great Britain. The beginnings of the purposeful promotion of industry by the state may be traced to the work of the Prince Consort, in the middle of the last century. It is of interest to recall that it was at the instigation of the Prince Consort that Hofmann came from Germany to the Royal College of Chemistry in London, where W. H. Perkin, one of his pupils, discovered the first synthetic dye. From that time forward our government has gradually increased its efforts for the advancement of science—for the support and increase of national prosperity. The Imperial Institute, founded as a memorial of the Jubilee of Queen Victoria, provided laboratories (1890) to investigate the properties of raw products from overseas. I myself worked there for several years under Sir Frederick Abel and Sir Wyndham Dunstan. It was not until 1915, however, that our government made direct financial provision for researches undertaken with definite utilitarian objects, which might be expected directly to promote industry. This resulted in the formation of our Department of Scientific and Industrial Research. This organization has by no means confined its attentions to utilitarian research; on the contrary, it has done much, by many routes, to enlarge and organize the scientific resources of the country in a manner calculated to foster the disinterested independence of scientific thought and action, as, for instance, by assisting and advancing the schools of research in pure chemistry at the universities. But it is to those particular activities which are primarily aimed at promoting industry by chemical research that I would now call attention.

The Department of Scientific and Industrial Research maintains a number of stations—those chiefly affecting the chemical and metallurgical industries being the National Physical Laboratory (similar to the U. S. Bureau of Standards), the Fuel Research Station, and the Chemical Research Laboratory.

But more directly the department pursues its industrial objectives by forming associations, in which the different firms engaged in any industry may join forces to maintain a research station. To these associations the government makes grants, usually on the £ for £ basis (amounting in effect to a subsidy) for a period of five years. On the expiration of that period grants have been made on a diminishing basis, the object being that the station may ultimately become self-supporting and independent of government control. For those who may be interested a statement on the policy and procedure of the Department of Scientific and Industrial Research on behalf of these associations is appended.

Benefits to Industry

Such in brief outline is the organization. How far does it show promise of achieving its object? As a method of enabling a group of small manufacturing units directly to solve problems which are common to all of them, the research associations have speedily proved their value, and, as a corollary, the scientific direction and teaching necessitated by the method have greatly benefited the industries concerned. Without these many firms, hitherto lacking in scientific personnel, would have been unable to take advantage of the results obtained by research.

Thus the effect of the British government's research organization is to benefit industry by solving current difficulties and introducing scientific method. This is quite aside from the real object of contributing new knowledge. The word "research" has been so misapplied that in the public mind great confusion now exists as to its proper meaning. "Research" in chemistry means seeking new facts or principles by a process of careful and diligent inquiry and investigation by experiment. This we all know is not identical with making use of scientific method and control in carrying out industrial processes. Only on rare occasions is it possible for the staff engaged in carrying out industrial processes to participate in research in regard to those processes. Nevertheless, there is a tendency, which needs correction, to regard the term "technical research" as synonymous with scientific control; and some are apt to believe also that it may be carried out by those possessing a lower standard of scientific ability than is needed for so-called "pure research," which is absurd. It is, of course, true that the results of research can rarely be applied where scientific method and control have not been established. A very valuable outcome of these new research associations has been to introduce into the factories a greater use of science.

Secrecy

The work of the research associations also tends to diminish trade secrecy by forming centers for the exchange of experience and the discussion of technical problems. There are many results of research, such as the elimination of waste and improvement in efficiency, in which questions of secrecy do not present great difficulties. Success in these directions quickly leads to closer co-operation, and thus to a greater desire to undertake such fundamental researches as lie outside the range of the firm's or corporation's own research department. Private enterprise in research thus becomes complementary to the association, rather than being in competition with it.

The difficulty of secrecy, however, cannot be lightly dismissed. The great value of competitive industry is that it induces emulation in two chief respects—efficiency and novelty. Expenditure on research is incurred by private enterprise for the sake of the power which results from early and rapid use of knowledge. Clearly, either effective patent protection or secrecy is needed by those wishing to exercise this power. In Great Britain the ineffectiveness of our patent law greatly contributes to this need for secrecy. Progress in science results from unity of effort, and secrecy is not only at variance with its spirit, but actually hinders its progress. The best solution of this difficulty would be the modification of patent laws in such ways that the fullest confidence may be placed in their justice and in the protection they afford.

At the present time the patent laws of Great Britain fail to inspire confidence, and they are being grossly abused in regard to chemical substances, because few dare face the great expense and uncertainty of patent litigation. One of the effects of the research associations and other trade associations is a higher standard of ethics resulting in mutual respect for each other's patents and a greater readiness to grant licenses.

It will take us too far afield to discuss in detail the defects of patent law as affecting chemical patents in different countries, but I would like to make it clear that we alone can take the first steps toward its rectification, so that it may carry out the essential purposes for which it is designed.

Key to Other Discoveries

In chemical discovery, and especially in organic synthesis, it is possible for one invention to be the key to many subsequent discoveries, and yet to be of little practical value unless those later discoveries are made; and these may entail much more vision, work and ability than the original invention. For avenues of systematic research thus to be monopolized is in direct opposition to the fundamental intention of patent laws, their object being to encourage and reward investigation. Today many, one might say most, chemical patents are designed to anticipate discovery in this way, so as to block the field to other workers. On the other hand, many successful inventions yielding large royalties are based on the scientific work of others who have sought no patent protection, and have consequently not participated in the reward which is justly due to them. It will thus be seen that there are ways in which patent legislation results in the actual discouragement of research. Chemical invention differs in many respects from mechanical invention, and there is a strong need that chemists in different countries would simul-

Francis H. Carr
Retiring President

taneously appoint committees to act in some concerted manner with a view to solving the many difficulties which beset chemical patents in our respective countries. Such committees would have as common objects:—(1) the encouragement of research; (2) maintaining a truly international spirit in science; (3) securing a just reward to the inventor for the improvement in industry resulting from his invention. A just reward ought to include remuneration to those who have contributed to the invention by researches freely published in scientific journals. If recommendations were made which received widespread acceptance among chemists of different nations, then when the stage was reached for putting them into legislative effect they would be the more readily adopted. In this way we might reach a better international unification of patent law than exists at present. It is chiefly by the improvement of patent law and of the ethical relationship among manufacturers that the difficulties of secrecy can be overcome.

I will now make brief reference to one or two examples of industrial research by which the world has been recently enriched.

Nitrogen Fixation

Industrial researches may involve heavy expenditure over a long period of time, and their ultimate fruitfulness may be delayed beyond the period over which any financial corporation could continue such expenditure. There are strong reasons why individual governments should work at these problems, and, where possible, even combine their strength in doing so; but it should be an underlying principle that responsibility be transferred to the shoulders of the manufacturers at the earliest possible stage. The problem, now happily achieved, of nitrogen fixation on a commercially successful basis was one unlikely to be solved without government support accorded during large-scaled experiments. There are many other similar problems, such as maintaining supplies of fuel oil, of potash and of sulphuric acid, which may arise in the future.

When in 1901 Sir William Crookes, one of our past presidents, predicted that without some new source of fixed nitrogen the steadily increasing population of the world could not be indefinitely maintained, he did not seriously doubt the ability of science to provide the means. Today, 27 years later, 1½ million tons of nitrate are being extracted from the atmosphere annually. Thus the nitrogen used up from the soil, in producing the increasing amount of food required by a population rapidly growing in number and raising its standard of material existence, is now amply replenished by the product of chemical industry.

It has recently been stated by H. J. Page that experiments in 80 centers "clearly prove that the stock-carrying capacity of pastures and their output of milk or meat may be increased to an unprecedentedly high level. Instead of requiring two or even three acres to graze a cow or its equivalent throughout the season, the average area of intensively-treated grass required for this purpose was only 0.72 acre, and in some cases figures of only half an acre or less were reached."

Fuel Research

Reference has been made to the Fuel Research Station, which constitutes one of the biggest industrial research undertakings of our government. Among the important technical problems on which this station is engaged is the production of smokeless fuel and of fuel oil from coal. It is also concerning itself with almost every aspect of the efficient winning and use of coal. A new experimental retort for the low-temperature carbonization of coal has been developed to such an extent that the Gas Light & Coke Co. of London are erecting a bank of these retorts capable of producing 100 tons of smokeless fuel per day. The government is providing the capital expenditure, and the company will work the plant for three years and under conditions which provide that the results will be made freely available to British firms. In Great Britain the production of a smokeless fuel is a matter of great public interest, on account of atmospheric pollution. Its commercially successful production, however, presents great difficulties, because it must be sold in competition with raw coal. The by-products from the tar obtained by the low-temperature process, being entirely different from those ordinarily obtained in producing gas, will not find their best market until their chemical nature has been investigated. This is being undertaken in the Government Chemical Research Laboratory, under the direction of Prof. G. T. Morgan, a member of our council and a former vice-president. In a preliminary communication to our society he recently described many interesting constituents of this tar, and there is already a promise of useful new basic material for the makers of dyestuffs, paints and resins. Who knows but that these may prove the means of turning the scale in favor of the economies of low-temperature carbonization? This kind of enterprise must be entered upon whenever opportunity serves. The dyestuffs industry has been built upon the unsaturated materials—benzene, naphthalene and anthracene—derived from high-temperature tar, and it would be wrong to assume that there will not be equally important outlets for the more saturated constituents of low-temperature tar.

Alcohols

As an instance of finding valuable new uses for raw products such as these, let me cite one American example which has greatly impressed British industrial chemists. I refer to the ingenious work in developing the production of alcohols for use in the lacquer industry. This chemical elaboration of the higher alcohols of glycol and other compounds, such as ethylene oxide and ethylene chlorohydrin, from olefine gas and from petroleum, has resulted not only in large-scale production, but in the finding of commercial outlets for many substances which had hitherto been regarded as possessing no practical value. Both in regard to petroleum products and to those derived by the fermentation of corn starch, we greatly admire the enterprise with which research has been prosecuted and brought to a successful issue in America.

Catalysts

Our former president and benefactor, the late Dr. Rudolph Messel, when addressing you in 1912, spoke on catalysis, a subject of which he was a master. Would that he were with us today to rejoice in the recent achievements that have been made in catalytic synthesis, and especially in the engineering feats which have brought to a practical issue catalytic processes, carried out at very high pressures.

In 1912 there were but a few large-scale operations in which catalysis was employed. We had the examples of the Deacon process for making chlorine and of the contact process for making sulphuric anhydride—processes which had been in use for a long time. There were few other examples. The practical application of Sabatier's work in the hardening of oils was still in its infancy. Since then numberless other catalytic processes have been adapted to large-scale manufacture, including the synthesis of ammonia, the oxidation of nitrogen, of acetylene, and of naphthalene. As a development of the high-pressure technique employed in the synthesis of ammonia, there is promise of much to follow. The manufacture of methyl, ethyl and other aliphatic alcohols by this means is already a practical achievement, and the day may not be far distant when the production of fuel oils from carbon monoxide and hydrogen will be a practical success.

It is to the combined work of the engineer and of the chemist that we must give honor for the industrial achievement of the high-pressure syntheses. They afford a supreme example of the importance of the partnership between engineers and chemists. If, as some suppose, these hydrogenation catalists act by the superficial fixation of free atoms of hydrogen, which, as Langmuir has shown, are endowed with so much greater activity than molecular hydrogen, then may we not hope presently, with greater knowledge of catalysts, or, it may be, by the more direct application of Langmuir's magnificent work, to succeed in carrying out these operations at lower pressures with much less complex plant?

Hydrogenation of Coal

Lastly, we have the liquification of coal by its hydrogenation. In one of the experimental laboratories of our Fuel Research Station I have recently witnessed the operation of powdered coal, treated by the Bergius process, passing into a bomb with hydrogen under pressure at a moderate temperature and issuing from it as a liquid fuel. From the well-established commercial use of hydrogenation in the hardening of oils, we are thus rapidly approaching this other great achievement—the softening of coal by a similar process. Considering the variety and complexity of the chemical constituents of coal, the success of this is indeed remarkable. It leaves us in wonder as to which of Nature's organic mixtures will next be found to be usefully modified by hydrogenation.

A few generations hence the world's accumulation of coal and petroleum will come near to exhaustion, while the demand for liquid fuel for motor cars and flying machines will have greatly increased. Carbon dioxide may then be the basic compound from which hydrocarbons are made. Indeed, chemical engineering progress is such that even in the near future it may be found best to resolve coal into heat, oxide of carbon and steam, utilizing them to build up the liquid hydrocarbons required for fuel.

However, artificer though the industrial chemist may be, in the organic chemical industry such instances will be exceptional, and he is ever likely to find it better to supplement than to replace Nature's syntheses. The products of organic life—wood, fiber, fruits and animals deriving sustenance from the vegetable kingdom, will still remain his raw materials.

In living matter syntheses must be carried out within narrow limits of temperature and pressure, for between these limits alone can life be maintained. These chemical changes are promoted by agents, the function of which resembles that of the inorganic catalyst, namely, by enzymes, hormones and vitamins. Our knowledge of these agents is a lodestar to the industrial chemist, for their dynamic efficiency is so remarkably high, and they bear the appearance of having been selected with far greater discrimination than the chemist has so far been able to bring to bear in the choice of catalysts.

This leads me to say something of medicinal chemicals, which (though not, it may be, to the extent that the public imagines) do constitute after all a very important part of the work of the industrial chemist—important especially because modern discoveries in this field have resulted in a very real improvement of public health and longevity. Formerly the remedial agents chiefly in use did more to abate symptoms and relieve pain than to remove their causes, but now, one by one, substances exercising a specific action against particular diseases are being discovered. It is being found that other diseases are due to a deficiency of one substance or another, which the industrial chemist can provide, either by synthesis or by preparing it from some natural source.

Medicinal Chemicals

At this point in his address Mr. Carr discussed research on vitamin D, insulin, thyroxine and chemotherapy. In conclusion he said:—

In all our organization of research we need to aim, on the one hand, at spreading initiative and responsibility as widely as possible and, on the other, at avoiding excessive secrecy and individualism. It is not to be expected that by any scheme of research organized from a center we can entirely and effectually replace research carried out by individual firms, unless these firms have intimate financial connection or are actually amalgamated. There is taking place throughout the world a reconstitution of competitive industry by amalgamations and like changes, opening up a new way filled with great possibilities for the better organization of industrial research.

In order to take advantage of discoveries in science, it is necessary that industrial leadership shall be entrusted to those who understand science and are therefore able correctly to judge the value of an invention, and it is of the greatest importance to the world that amalgamation, whether of firms or of their research departments, shall be accompanied by the provision of effective scientific leadership. In large concerns such leadership cannot be secured unless individuals concerned are invested with a full measure of power and importance in relation to the commercial and financial direction. There is grave danger of this not being recognized when control passes into the hands of large financial interests.

Just as science is a thing of great refinement and delicacy, only to be cultivated in an atmosphere of high motive, and not a selfishly commercial one, so those applying it require an outlook upon work and life which goes beyond that of piling up wealth. They can take delight in producing riches, but they need also to know that the results of their labors will count in the scheme of the universe. Industry is a unified organization to satisfy the material wants of men, and is not, as is apt to be assumed, merely a means of accumulating personal wealth. If private enterprise fails, as the result of amalgamations, to fulfill this view of its function, the world will be faced with the alternatives of social chaos or socialism.

The world must look untiringly to the inspiration of science for the solution of social problems. At the opening of this address I spoke of the war humanity's greatest though most gruesome experiment, as an example of men uniting for one commonly accepted object. Is it too much to hope that when the world is finally released from the fear of war (and, indeed, from that much greater fear—that our civilization may suffer destruction through the power of science) nations will combine to promote, with greater and greater intensity, the objects of science in harnessing the resources of the world—the human endeavor, the power and natural material—to the betterment of mankind? Visionary though such altruism may be, the fact remains that most men are fully satisfied only if in one way or another they are working for a common, unselfish object. It is indeed for such an object that we are united in the Society of Chemical Industry.

An appendix to the address discussed the formation of co-operative industrial research associations, their incomes and grants, and the organization of their work.

Technical Papers

Technical papers read at the meeting were, either in whole or in part, as follows.—

Glass and Chemical Industry

In a paper on "Applications of Glass to the Chemical and Allied Industries," A. E. Marshall, Baltimore, consulting engineer to the Corning Glass Works, Corning, N. Y., said in part:—

When we consider the present position of glass as an industrial material we find little alteration in what might be called the architectural field, and a greatly increased usage in the manufacture of chemical and allied products, and in the construction of electrical apparatus.

These developments are due to the introduction of new types of glass with new combina-

A. E. Marshall

tions of properties which are so different from ordinary glass that from the engineering standpoint they are now considered as special materials.

Glass, because of its insolubility in acids, was always a favored material for laboratory and small scale experimental work, but limitations in the way of temperature resistance restricted any large scale use, as the larger sizes of equipment had to be made with substantial walls, thus losing the thermal endurance of small shapes which always had thin walls.

With the development of pyrex baking ware, with its substantial walls, its demonstration of ruggedness under constant handling, and its resistance to heat shock, it became evident

that some of the disadvantages of ordinary glass had been overcome, and that a new and promising material for laboratory and plant use had arrived.

This new glass had a surprisingly low coefficient of expansion, so when the production of laboratory apparatus was undertaken, baking ware practice was followed and the various shapes were made with thicker walls than had been customary with other glasses. The resulting improvement in resistance to mechanical shock and the increased resistance to temperature changes soon evidenced themselves by decreased service breakages.

Plant engineers became familiar with the advantages of the laboratory ware, and began to consider the desirability of trying to overcome some of their corrosion problems by the use of pyrex plant equipment. The fabrication of the shapes needed for plant work called for many new methods of manufacture, so the history of the development of what we now call pyrex industrial ware is a composite of definite improvements in glass properties and the working out of new processes of fabrication.

Before proceeding to describe the present varied industrial uses it seems desirable to detail the chemical and physical properties of the glass.

Mention has already been made of the expansion coefficient, and it is interesting to compare the expansion figures with those of other materials in frequent use:—

Linear Expansion Coefficients

	Degrees C.
Pyrex industrial ware	0.0000032
Procelain	0.0000036
Hard glass	0.0000077
Soft glass	0.0000085
Cast iron	0.0000102
Wrought iron	0.0000119
Portland cement	0.0000130
Copper	0.0000167
Brass (66 Cu 34 Zn)	0.0000190
Zinc	0.0000258
Lead	0.0000276

Mineral acids, with the exception of hydrofluoric and phosphoric, have no appreciable action up to their respective boiling points. Initially there is a very slight surface attack, the figure for constant boiling hydrochloric acid being 0.000006 g., and for fuming sulfuric 0.000002 g. per sq. cm. per hour. This initial action is succeeded by a state of practical stability.

In the case of phosphoric acid, the attack produces crystallization at the glass surface and makes accurate determinations of solubility rather difficult. An average figure arrived at by the Corning laboratories is 0.0027 g. per sq. cm. per min. Hydrofluoric acid does not attack pyrex ware as readily as other glasses, this being a matter of knowledge possessed by all laboratory workers who have tried to etch beakers or flasks. The action is, however, sufficient to prevent any serious consideration of the use of pyrex equipment for hydrofluoric acid or fluoride production.

Caustic alkalies show, as might be expected, increased action with increase of concentration and temperature.

Some of the properties of interest to the chemical engineer and the physicist are:—

Specific gravity, 2.25.
Specific heat, 0.20.
Elasticity coefficient, 6230 kg. per sq. m.m.
Refractive index, 1.4754.
Dispersion, 0.00738.
Light transmission, higher than plate glass.
Hardness, 120 (scleroscope).

Heat Transfer

Heat transfer is of course a vital factor in many forms of plant equipment. The Corning laboratories have devoted a good deal of attention to measurements of the rate of heat transfer, and it has been found that while copper has a thermal conductivity 300 times greater, it only condenses 2.5 times as much as the glass at rates of flow customary in plant practice. Under actual plant operating conditions values as high as 125 B. T. U. per sq. ft. per hr. per degree Fahrenheit have been obtained in tubular horizontal coolers designed for liquid to liquid heat transfer.

Uses for a material possessing the unusual combined properties of transparency, chemical stability, low expansion, and a high degree of surface smoothness and hardness are varied, and an analysis of specific applications shows that while one property may be of primary importance, some or all of the other qualities are usually also of direct benefit.

Where resistance to corrosion is an outstanding requirement, thermal endurance and surface smoothness are generally advantageous characteristics in constructional materials. Most chemical operations involve the application and withdrawal of heat, so equipment resistant to corrosion, but incapable of withstanding temperature changes would be of value only for reactions in the cold, or storage purposes. Heat transfer values are decreased to an appreciable extent by rough surfaces, as smooth surfaces permit heat transfer apparatus to remain reasonable in size even when low conductivity materials are used in their construction.

Littleton and Bates in their determinations of the heat transfer value of pyrex condenser tubes made parallel runs on copper and steel tubes. They found that the thin oxide film developed by heating copper tubes in air to 650 deg. C. for one hour decreased the rate of transfer 13 percent as compared to the tube before oxidation.

In other applications smoothness may be the most important property and transparency or chemical stability, the qualities called on to make the smooth surfaced article a practicable piece of equipment.

The electrical characteristics of pyrex radio insulators are quite interesting, and the appended table will enable useful comparisons to be made by those familiar with the corresponding measurements for ordinary glass, porcelain and synthetic insulating products:—

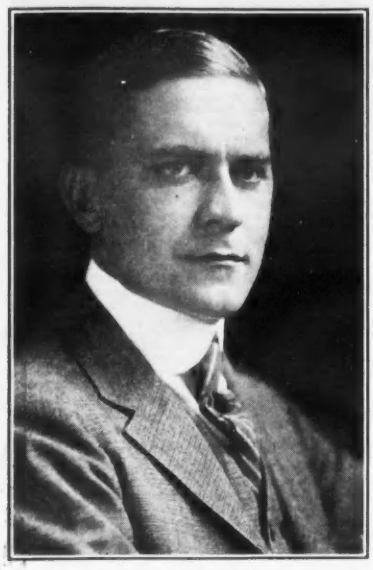
Dielectric strength, 35 kv. per 100 mil thickness.
Dielectric constant, 4.48 (50,000 cycles).
Phase angle difference, 0.18 degree (30,000 cycles).
Power factor, 0.28 percent (30,000 cycles).

Anti-Knock Motor Fuels

A paper on "Anti-Knock Motor Fuels," by Dr. Graham Edgar, director of research for the Ethyl Gasoline Corporation, New York, follows:—

The phenomenon known as the knock or pink (in England) occurring under certain conditions in the internal combustion engine has been the subject of many investigations during the past twelve years or more, and an extensive literature on various phases of the matter is now available. The names of Kettering, Midgley and Boyd, in America, and of Callender, Ricardo and Egerton, in England, have been intimately associated with the early history of the subject. Since this paper is written for the benefit of chemists, many of whom may not be familiar with the engineering problems involved, the writer may perhaps be pardoned for presenting a brief summary of the more important relationships of the knock to the efficiency of the internal combustion engine.

The present day automobile engine is practically entirely of the four cycle type, the four cycles representing the intake stroke, the compression stroke, the explosion or power stroke, and the exhaust or scavenging stroke. The efficiency of such an engine depends upon a number of factors of design, but all other things being equal, it depends almost entirely upon the extent to which the charge is compressed. The ratio of the total volume of the cylinder and cylinder head to the volume at the end of the compression stroke is called the compression ratio, and in general for a given engine, the higher the compression ratio, the greater the proportion of the energy of combustion of the fuel which is converted into useful work. In the average automobile engine of the present day the compression ratio is between 4.5:1 and 5.0:1. Practically the entire present tendencies in research looking towards an increase in automotive efficiency are in the direction of



Dr. Graham Edgar

increasing the charge density, either by increasing the compression ratio or by precompression of the intake charge (supercharging). In both cases the tendency of the fuel to develop the knock limits the possible improvements in these directions. For this reason the "knocking characteristics" of the various fuels represent the most important single factor in limiting the advance of the internal combustion engine towards higher efficiency. Even the average engine of today tends to knock on average gasoline, particularly on hills, on accelerating or when "carboned up," and thus the use of anti-knock fuels is of material advantage even without further increases in compression. If the type of explosion known as the knock did not appear, compression ratios of 7:1 to 9:1 might be employed, with very considerable increases in efficiency. The importance of the knock from the standpoint of fuel conservation and engine efficiency is therefore readily understood.

Nature of the Knock

Under certain conditions the explosion of the charge in the engine cylinder deviates from the normal and a characteristic high pitched metallic sound is heard which is familiar to the motorist, particularly when his engine is laboring on a hill or accelerating from low speeds. This sound the motorist calls the knock or pink. From the engineering standpoint the knock is objectionable because it results in (a) drop in power; (b) overheating the engine, and (c) in severe cases, mechanical damage to engine parts. Extensive study of the subject by engineers, physicists and chemists has developed a number of facts concerning the phenomenon, the more important of which are the following: (1) the tendency to knock for a given fuel is dependent upon (a) the temperature of the engine; (b) the density of the air-fuel charge at the time of ignition; (c) the time of igniting the charge; (d) the design of the combustion chamber and the position of the spark plug therein; (e) the amount of carbon on the walls of the combustion chamber; (2) for a given engine under given conditions the tendency to knock is entirely dependent upon the chemical nature of the fuel employed; (3) when an engine is knocking the fuel is burning more rapidly than during normal operation; (4) by some the knock is regarded as due to true detonation of a portion of the charge, i. e., an explosion at very high uniform velocity. Others believe that true detonation does not occur but that "vibratory burning with the development of pressure waves" occurs. In either case the nature of the combustion differs markedly from that progressive burning of the normal explosion and results in very high rates of pressure rise; (5) the knocking explosion is accompanied by an increase in radiant energy, which may account for the loss of power and the temperature rise of the engine; (6) the knock may be decreased, for a given engine and a given fuel, by the addition of very small amounts of various substances, the so-called anti-knocks, and increased by small amounts of so-called knock inducers; (7) the knock invariably occurs in the latter part of the combustion, and should be sharply distinguished from pre-ignition, or ignition of the charge by a hot spot, before the spark is fired.

Theoretical Aspects

The combustion of fuel in an engine involves a large number of factors, such as the actual chemical mechanism, the nature of flame propagation, the emission and absorption of radiant energy, varying conditions of temperature and pressure, the influence of turbulence, etc. Several of these factors are probably involved in the production of the knocking type of explosion and it is not surprising that no satisfactory simple explanation of the cause of the knock and the mechanism by which anti-knocks act has so far been developed. The writer does not feel justified in taking the space necessary for a discussion of the many theories which have been proposed in the matter, involving, for example, the influence of a diabatic compression, of ultraviolet and infra red radiation, of nuclear drops, of finely divided metallic particles, and of peroxides. It is sufficient to say that none of these theories give an explanation of all of the experimental facts. During the last year or so the trend of research has been toward examination of the actual chemical mechanism of the oxidation of the fuel. At present most investigators seem to feel (a) that the knock appears when the rate of oxidation of the fuel exceeds some "critical velocity"; (b) that the reactions of oxidation are photochemical "chain reactions" similar to the simpler case of the oxidation of phosphorus, and (c) that anti-knocks reduce somewhat the total rate of oxidation by breaking such chain reactions. Opinions vary, however, as to the exact mechanism of the oxidation itself, and as to the exact way in which anti-knocks bring about their effect. It is to be hoped that the many investigations which are in progress on the subject may lead to some relatively simple answer to the problem, although it is quite possible that there may be no one factor which is predominent in all cases.

Fuels from Petroleum

The chemical nature of gasoline depends on the nature of the crude oil, and the refining process to which the oil has been subjected. By the straight distillation of crude oil, the gasoline obtained is composed largely of substances which were present as such in the oil; in "cracking" of crude oil the chemical nature of the gasoline is affected by the temperature and the pressure (and catalyst) to which the oil has been subjected.

Gasoline is a very complex mixture of hydrocarbons, in which four classes are usually recognized; paraffins, olefins, naphthenes and aromatics.

Following is the status of our knowledge of their tendency to knock:—

(1) The straight chain paraffins have a very great tendency to knock. The branched chain insomers have less tendency to knock, some being even very good non-knocking fuels.

(2) The olefins have as a class less tendency to knock than the paraffins, but individual members vary enormously in this respect, according to the arrangement of the carbon atoms, and the position of the double bonds.

(3) The naphthenes as a class have less tendency to detonate than the paraffins, but very little is known about individual members of this class.

(4) The aromatic hydrocarbons all show very little tendency to detonate and show much less variation among themselves than hydrocarbons of the other classes.

Since chemical examination of gasoline gives only very uncertain data even as to the quantities of these different classes which may be present, and no information at all as to the individual members, it is clear that little can be learned by such an analysis as to the actual tendency of a sample of gasoline to knock, and actual engine tests are necessary for this purpose. Information as to the actual chemical composition of gasoline would be of extreme value, but little progress has so far been made along this line.

Other Fuels

(1) Fuels from distillation of coal consist largely of aromatics, and therefore have relatively little tendency to knock. Such fuels are largely employed today for blending with fuels from petroleum.

(2) Alcohols have relatively little tendency to knock, and when blended with petroleum fuels serve to improve the knocking characteristics of the latter. Certain practical difficulties such as cost, tendency to absorb water, etc., have so far prevented extensive use of such fuels. The production of alcohol on the enormous scale necessary to meet fuel needs also presents serious problems in supplies of raw materials.

(3) Only scant information is available on synthetic fuels from hydrogenation of coal, or from water gas. Some tests have been reported recently on special fuels for racing cars which were composed largely of such synthetic fuels, and which were said to have very good non-knocking characteristics.

Use of Anti-Knocks

Only two of the many substances which have an effect in reducing the tendency of a fuel to knock have come into commercial use, tetraethyl lead and iron carbonyl. The former is extensively used in America and England under the name of ethyl gasoline (or ethyl petrol); the latter has been used to some extent in Germany under the name of motalin; both of these substances are effective in very small concentrations; thus one part of tetraethyl lead by volume in 1,300 parts of gasoline, or one part of iron carbonyl in perhaps 500 parts of gasoline has about the same effect on the knock as the addition of forty parts by volume of benzol to sixty parts of the same gasoline.

Measuring Knock Characteristics

So much has been recently published on this subject that the writer will only point out what these methods usually involve:—

(a) Measurement in a given engine of the comparative charge density at which two fuels under observation begin to knock, the charge density being varied by varying the compression ratio in a variable compression engine; the supercharging pressure in a fixed compression engine, or the throttle opening on an engine of fixed and high compression ratio. In these methods the ear is usually employed to determine the point at which the knock begins, and the fuels are usually compared on some scale relating to the compression ratio, throttle opening, manifold vacuum, etc., of the particular engine. (It should be pointed out that the knock is influenced by so many variables that all such data are comparative only and not directly translatable in absolute units to another engine.)

(b) A comparison of two fuels by determining the amount of some anti-knock or non-knocking fuel necessary to equate the knocking characteristics of one fuel with another in a given engine under constant conditions of operation. In this case the ear may be used to measure the knock, but more frequently an instrument known as the "bouncing pin" has been employed for this purpose.

Automotive Engine Design

As pointed out above, the efficiency of the automobile engine is definitely limited by the knocking characteristics of the fuels which are commercially available. Many improvements are possible, with any fuel, by careful design of the combustion chamber, etc., but the fact remains that with any given engine design, greater efficiencies are possible with non-knocking fuels, and the automotive engineer may be expected to produce engines of greater and greater efficiency the better the fuel for which he can design his engine. Such tendencies have already been shown (a) in a definite increase in the last few years of compression ratios in automobile engines, and (b) the appearance to a certain extent of special high compression engines designed to operate on the better anti-knock fuels. It may be noted that for special purposes, such as racing, aviation engines, etc., for which fuels are available of extremely high anti-knock characteristics, engines of extraordinary efficiency have been developed. The future of the automotive engine seems to lie in the direction of high charge density at the time of explosion, obtained either by high compression (improved thermal efficiency and power-weight ratio) or by supercharging (improved power-weight ratio), or both. The extent to which such development can proceed is limited by the fuels which may be available.

Tendencies in Fuel Production

It has not been so many years since the oil refiner was mainly interested only in the volatility of gasoline (and its freedom from extraneous impurities), but now that the automotive engineers and to some extent the motoring public have begun to realize the importance of non-knocking fuels, a tremendous amount of research is being carried out on the problem, and there seems to be every reason to believe that progress will continue to be made in a number of directions, looking towards the development of superior anti-knock fuels, and the general improvement of the knocking characteristics of all motor spirit.

(a) It has already been shown that changes in the conditions, temperature, pressure, etc., under which oil is cracked, will affect the anti-knock quality of the gasoline from a given crude. Since such processes also increase the yield of gasoline from crude oil, they will become increasingly important as the supplies of crude oil begin to lessen. The chief difficulties which have to be met in cracking are, first, the cost problem, and, second, the tendency of highly cracked gasoline to develop objectionable amounts of gum. Vapor phase cracking has so far been the most successful in producing gasoline of high anti-knock properties, but it does not seem to have been developed on a very large scale because of the difficulties above mentioned. In the early days of cracking the processes employed were largely empirical, but this stage of development is beginning to pass. It is quite clear that the chemical nature of gasoline from a given crude oil is capable of a considerable amount of control by control of the condition under which the cracking takes place, and there seems to be every reason to believe that the future will show marked advances along these lines.

(b) Segregation of gasoline made from crude oils high in anti-knock value results, of course, in making available relatively small amounts of gasoline of above average anti-knock quality, but does not influence the problem of the improvement of motor fuel as a whole. The known fields of such oil are of limited capacity, and there seems little reason to expect the discovery of new fields of crude oil of such quality and in such quantity as to become a serious factor in the world's market for anti-knock fuels.

(c) Increase in the employment of low temperature carbonization processes for coal may be expected to increase somewhat the supplies of motor benzol, but it seems improbable that the supplies will ever be in any way sufficient to improve materially the knocking characteristics of the world's gasoline.

(d) Synthetic fuels, which seem a most probable future development, being produced with the aid of high pressure and temperature, may doubtless be capable of producing fuels of good anti-knock quality, although any predictions on this point are somewhat premature.

(e) Anti-knocks of satisfactory effectiveness are already available, and the possibility always remains of discovery of new materials of this class of even greater effectiveness than those now in use. The use of anti-knocks has many advantages since by their use it is always possible (a) to improve the anti-knock quality of even the best fuel produced by refining or other processes and thus always provide the superior fuel on which new developments in automotive progress may be based; (b) to adjust the differences in anti-knock quality of refinery produced fuels (which are always variable in quality) and thus enable the maintenance of definite standards of anti-knock quality (which will be of greater and greater importance as the high compression engine is developed); (c) to bring up to a high anti-knock quality the large percentages of "straight run" gasoline from inferior and average crude oils which must always be produced unless very radical changes take place in the whole process of oil refining. There seems every reason to believe, therefore, that anti-knocks will continue to play an even more important role in the future development of fuel than they are playing at present.

Potash from Searles Lake

A paper on "Potash and Borax from Sarles Lake," with special attention to unconventional equipment, was read by Dr. John E. Teeple, consulting chemical engineer who built the Searles Lake plant for the American Potash & Chemical Corporation, follows:—

The subject which your committee gave me to discuss, "Potash and Borax from Searles Lake," has already received considerable attention in talks and published articles. The phase rule diagrams and data on which methods of separation were based, and the story of the business from its inception to the present, are now in course of publication in book form. There is little of a specific nature to be added at this time, except to state that the plant is producing regularly just about the amount of potash and borax for which it was designed, the cost of production is a little lower than I anticipated, the whole of the output is being sold as fast as it is produced; and the company is paying dividends.

Under these circumstances I hope for your pardon if I simply use my subject as a hook on which to hang a few general observations regarding unconventional equipment, that seem to be pressing for utterance now.

The situation at Searles Lake has several unusual features. In the first place, we may regard the raw material as having no cost. While this is not strictly true, it is the proper point of view to use, and the one we have used in developing the enterprise. Whatever the cost of the raw material was, the price had already been paid before I ever saw the property, no additional payments are required for using the brine, and if we do not use it someone else probably will. Second, and this follows as a corollary of the first, since raw material costs nothing, the percent of recovery attained is relatively unimportant. We are not warranted in going to considerable additional trouble and expense to raise, for example, an 80 percent to a 90 percent recovery, or a 70 percent to an 80 percent one. If that additional 10 percent costs more in operating expenses or takes more time in the plant than the first 10 percent did, we had better forget it. Third, the essence of success in an operation of this type is continuity. Not only continuity in the sense of 24 hours a day and 365 days in the year, with no stop for any purpose that can possibly be avoided, but also continuity in the sense of having no batch operations. The ideal we set was to have a continuous stream of raw brine coming from the lake at the rate of a ton every 10 or 12 seconds, and a continuous stream of potash and borax leaving the equipment ready for shipment.

There were to be no accumulations or partly manufactured materials, no off-grade products to go back for re-working. If something happens to throw the operation out of step, better to bury the mistake in the lake than to disarrange the smooth course of affairs by trying to send it back into the system. We did not quite succeed in making the plant entirely continuous, but the approximation is very close. These three unusual features, and others which I have not mentioned, made it necessary to design a considerable part of the plant rather than equip it with standard apparatus as would normally have been done, and it seems worth while to spend a few minutes in discussing, whether, when and why a chemist, industrial chemist, or chemical engineer is justified in designing equipment for which standard or commercial designs are available.

We have on the one hand a considerable pressure from chemical engineers who want to design everything, including boilers, engines, motors, cranes, and railroad tracks. On the other hand, we have the pressure of the equipment makers who have certain types of apparatus that they believe will work and that they wish to sell. In this country there is a widespread movement, with which I am in full sympathy, to standardize output in

nearly every line, to restrict designs to a very few types, and attain quantity production in those types. The lazy chemical engineer agrees with the equipment makers, installs their apparatus without question, uses their blue prints as the basis of his plant layout, and is responsible for the installation of enormous quantities of plant not well adapted to the particular service required. A third variety of chemical engineer neither designs nor buys standard equipment, but copies the work of other people and calls it design; we are not concerned with him here.

Choice of Equipment

My own inclinations lead toward the installation of standard commercial types of apparatus whenever it is humanly possible to do so without too great sacrifice. But we must remember that every piece of commercial equipment has been designed and developed under a given set of conditions. It is probably fairly well adapted to function under those particular conditions or else it would not have persisted and become a standard article of commerce. It is the duty of the chemical engineer to study his problem intensely to determine just what are his conditions and limitations. If these coincide with the conditions and limitations under which commercial equipment developed, all is well, but if his conditions diverge in what seems to be an important condition or limitation, then he is warranted in making a new study, and, if necessary, in designing new equipment to fit his conditions.

Very often he finds his own problem free from some limitation that has been imposed on the standard equipment. To illustrate: recently a man who had had considerable experience with a certain type of carbonating tower was discussing the installation of some towers for carbonating a different liquor under entirely different conditions. His whole attention was centered, however, in arrangement of cooling coils and abundant supplies of cooling water. Because these had been important conditions in his previous experience he entirely overlooked the fact that his present problem was freed from that limitation and cooling was not needed. It was a time to design a tower and not copy a former type.

Another illustration:—At a certain stage of the proceedings in the plant at Trona we obtain a hot solution rich in potash and borax. If this solution is cooled rapidly, not agitated too much while the temperature is low, and prevented from accidental seeding with borax, the potassium chloride crystallizes out and can be separated in a rather pure condition from the solution which is supersaturated with borax. A simple cooling job with certain limitations. The equipment consisted of a tank filled with a maze of pipes, pipes for cooling water, pipes for refrigerated brine and pipes for expanding ammonia. This complicated system was gradually simplified till we had a really workable apparatus, but none of them was free from one particular disadvantage; in every case heat must pass through a surface, usually steel, from the hot liquor to the cooling agent; and, especially at high temperatures, salt is deposited on the surface in a hard layer, which rather effectively slows down or prevents heat exchange.

When this limitation became clear the answer of course appeared simultaneously. The real way to cool a hot aqueous solution quickly is to subject it to a vacuum and evaporate a little water from it. The equipment indicated then was a vacuum cooler, which is a fairly well known piece of apparatus, but since the essence of our whole general problem was continuity of operation, the indications in our case called for a continuous vacuum cooler. None of us had ever seen one or heard of one in operation. No salesmen were pressing us to buy such an article. No manufacturers of equipment were interested. Why? Possibly on account of mechanical troubles, possibly because the small demand did not warrant the effort necessary to develop a workable one. But we needed exactly that piece of equipment and it would be worth the effort, so it was designed and it worked. Hour after hour the liquor flows in hot and flows out cool at a rate of nearly half a million gallons per day, then is cooled further in an ordinary continuous cooler, and the job is done.

After the potash has been separated from the cooled liquor we have a solution supersaturated with borax. The indication here to reduce the supersaturation is a commercial continuous crystallizer of which there are several on the market. These were looked over and one or two of them tried, without much success. The limitation is the formation of very fine crystals and even slimes which are difficult to handle. This tendency is far beyond what is contemplated in the usual continuous crystallizer to be used on sodium sulphate, sodium phosphate and similar products, consequently it was again necessary to design one suited to our actual conditions. The result of the cerebrations of our chemists and engineers looks like some prehistoric monster. No builder of continuous crystallizers would recognize it as a member of his family; but it works.

Removing Waste Salts

Another illustration is furnished in the removal of waste salts from the evaporators. These waste salts must be removed from the evaporators at the rate of over one ton per minute, must be washed free from concentrated and partly concentrated liquor, the liquor must be returned to the evaporators and the salt discarded. We found a common type of commercial equipment in place to perform this service. It consisted of bucket elevators, washing classifiers, and settlers. A certain amount of separation was accomplished, the salt could be removed from the evaporators by this method, but it was very wasteful of liquors on which money had been expended. This system was later replaced by another rather ordinary type of salt boxes. The change was an improvement but was far from being a solution of the problem. Again it was necessary to make a study of our conditions and limitations to determine why the unusual methods and commercial equipment were not satisfactory.

Two thousand tons of waste salt per day is a considerable quantity, but the amount of salt was not the real limitation. It was the ratio of waste salts to the valuable salt in solution. We were evaporating a brine in which the waste salts were four to five times the weight of the recovered valuable salts, and this high ratio placed the problem entirely outside the field of ordinary commercial equipment. So it was again necessary to design a piece of apparatus that did fit these conditions and that did work continuously. The result bears no resemblance to any salt removal apparatus I have ever seen, but it works.

Design of Evaporators

Just one more illustration and I have finished. We bring in to the evaporators a ton of brine every ten or twelve seconds. This brine is two-thirds water, so that the equipment must be capable of evaporating at least three or four tons of water per minute, day and night. After a good deal of experimental work and operation of evaporators we decided that it was a case for design and not for commercial equipment, but please note that this decision was not based on the magnitude of the operation. It was only in part based on the rather narrow path of temperatures and concentrations which we must follow in evaporation if we are successful. The real reason for our decision was the desire to make the evaporation a continuous operation. No matter how high the liquor is carried above the tubes of the evaporators, or at what speed it circulates, there is a rapid deposit of salt in the tubes which lowers the heat conductivity, and consequently the rate of evaporation, within a few hours to a point where it is necessary to stop, discharge the liquors, wash the tubes, refill and start over again. Such a break in continuity could not be endured if there were any way to avoid it.

There seemed to be no fundamental reason why the heating tubes should be in such close contact with the flash chamber, as is customary in commercial evaporators. It seemed, further, wise to build the heater in units, each one of which could be cut off from the flash chamber, washed out at will and reconnected without interfering with the continuous operation of the evaporators.

This would obviate the necessity of shutting down a whole system of evaporators just because you wanted to wash out a few heating tubes. The idea is not particularly novel, but in designing apparatus for a specific purpose novelty is quite a subordinate factor.

Dr. John E. Teeple

While we were at it we made a study of the liquor in the three pans of the triple effect evaporator and found that the usual statement that the speed of liquor in heating tubes must be six feet per second in order to prevent heavy deposit of salts was one of those general statements which might be true sometimes, but should not be followed too far. It became evident that the optimum speed, or rather the economic speed, varied from pan to pan.

With some liquors it might be as low as two or three feet per second; with others it might be as high as six or eight. The average heat conductivity with different liquors varied likewise. It soon became evident that at least with the liquors we were evaporating the uniform amount of heating surface and uniform speed of liquors in the three pans was a decidedly uneconomic arrangement. I do not know yet what the most economic arrangement would be, but probably if one first determines the economic speed of liquors in the tubes of the three pans, then determines the average conductivity between washouts in each pan, then multiplies that average conductivity in each pan by its heating area, the resulting product should be about the same for all three pans. In any case we designed evaporators to embody these different ideas, and they function in a satisfactory manner.

The above illustrations I think will bring out clearly my idea of when a chemical engineer is justified in rejecting commercial equipment and designing his own. He is never justified if there is equipment available which will fit his conditions with a fair degree of approximation. The equipment maker must, of course, use a shotgun method. He desires to have his particular design cover as broad a field as possible in a more or less satisfactory manner. His piece of apparatus will probably be exceedingly well adapted to a certain use or to handling a certain quality of material. It will be less well adapted if you vary the use slightly or vary the quality of material a little, and there comes a point in this variation, usually much quicker than the manufacturer believes, where his equipment is not very satisfactory, although he still likes to try to make himself believe that it is.

It is the function of the chemical engineer to determine in any specific problem just what his limiting conditions are. If those limiting conditions are the same as those under which available commercial apparatus has been developed, it is highly probable that he should buy and not design. If, however, his limiting conditions are very decidedly either greater or less than those under which commercial apparatus has been developed, then he will do well to put standard equipment entirely out of his mind so that it may not handicap his imagination, and undertake the design of a very specific piece of equipment to fit his very specific limiting conditions. It was necessary at the Searles Lake plant, on account of the very unusual conditions, to design a much larger proportion of the equipment than is usual, but I think it is safe to say that we never undertook the design of a piece of apparatus until it was absolutely forced upon us by our inability to find commercial apparatus that would meet our limiting conditions.

American Petroleum Industry

An abstract of a paper on "The American Petroleum Industry," by Dr. Benjamin T. Brooks, consulting chemist, New York, follows:—

The old Pratt works on Newtown Creek, Long Island City, now one of the refineries of the Standard Oil Company of New York, was originally built for the purpose of distilling shale oil. It followed the pioneer work of James Young in Scotland, who developed the shale oil industry in Scotland in the period 1850-1862. With the drilling of the first oil well near Titusville, Pa., in 1859, the elimination of the shale oil industry in America was quick and complete. The future will certainly bring a revival of the shale oil industry in America. The potential production of enormous quantities of motor fuel and lubricants from the oil shale deposits of Colorado is one of our guarantees for the future.

Higher Cost Predicted

Col. Drake struck the oil sand at Titusville at a depth of about 70 feet. In California some of the oil sands are a mile deep, and several wells have been drilled to a depth of over 8,000 feet. Deep drilling adds enormously to the cost of producing oil. Deeper drilling, extensive "wild catting," and geological study have maintained our production at about 70 percent of the world's total. Future production is uncertain and earlier predictions of oil exhaustion have always proven wide of the mark. However, about half of our production is from new flush wells, and as long as new discoveries keep up as in the past oil will be abundant. Increasing drilling costs, an increasing necessity for wild catting or exploration and the definite depletion of existing fields will bring about the importation of more and more of our oil requirements from abroad. We are now importing an important part of our requirements from Mexico, Venezuela and Colombia. This proportion is certain to increase. We can expect to produce half our requirement from American fields for many years to come, making up the balance as required from foreign sources. With the inevitable depletion of both foreign and domestic oil reserves the rising cost of petroleum will bring into existence a shale oil industry. The only if in the matter is exactly when. The general opinion now is that anyone who invests money in shale oil manufacture in this country just now is either very brave or very foolish.

Oil from Coal

America possesses an enormous coal reserve, particularly of bituminous and brown coals or lignites which are suitable for the production of oil resembling petroleum by the Bergin process. This process, now being operated commercially in Germany, yields from 90 to 130 gallons of oil per ton of coal, of which about 40 gallons is suitable for motor fuel. This is our second guarantee for the future. We can always have motor fuel if we are willing to pay the price.

American Methods

Most of the cases of mushroom millions quickly made in the oil business have been in the discovery and development of new oil fields. These incidents have given us "Coal Oil Johnny" and many other get-rich-quick "Johnnies"—also a few Dr. Cooks. But petroleum refining is a manufacturing business. The American public has a total investment of about nine billions of dollars in the American petroleum industry, in about 300,000 wells, 600 refineries, transcontinental pipe lines, fleets of tankers, many thousands of railway tank cars and filling stations now almost as abundant as corner groceries.

The oil refining industry was one of the first American industries to organize itself for efficient business management into large units and co-operating groups. It was thus that John D. Rockefeller, the grand old man of the American petroleum industry, showed his genius. Viewed from a chemical and an engineering standpoint, good business organization was many years ahead of good engineering. The last twelve years, however, have been characterized by a thorough and energetic application of the best that engineering could offer. No refiner could now use the methods in common use in 1916 and stay in business. The money value of these refinery improvements of chemical engineering amount to not less than half a billion dollars a year. Two years ago Walter Miller estimated the money value of improvements in the distillation of light oils at $120,000,000 annually. Better methods of cracking heavy oils to make gasoline, better methods of distilling lubricating oils, better refining methods generally with the saving of steam and fuel, lower labor costs, the saving of many millions of barrels of crude oil emulsified with salt water, the recovery of gasoline from natural gas and refinery gases, reaches a tremendous total money value. This money is not in the pockets of the refiners or their investors, but the greater part of it has been passed on to the public in the form of low costs for motor fuel and lubricants, paving asphalt, kerosene, etc. The competitive nature of the industry and the abundance of crude, with better and better chemical engineering has kept prices to the public down about on par with pre-war figures.

Current and Future Changes

Refiners are now seeking greater diversity of manufactured products—which necessitates chemical research. Research is scientific exploration. Oil refiners have not been blind to the enormous changes made in the electrical industry where practically every product is a product of research, and to the unfolding of the beautiful and variegated chemical industry developed from the ugly chrysalis of coal tar. They have seen the relative price scale of crude oils, no longer based primarily on gasoline content, but greatly changed by modern cracking processes which makes every barrel of oil of whatever kind a potential source of gasoline. The study of anti-knock motor fuels has shown the basic importance of chemical character—and good anti-knock gasoline commands a premium price. The significance of these facts is not lost upon the directors of the more progressive companies.

What will these new products to be made from petroleum be? Only the research chemist can tell, and generally he doesn't tell. But already solvent alcohols for automobile lacquers and other purposes are being made by chemical processes. A better and harder wax is being made. The research chemist has in view a whole series of organic products such as fatty acids for soap, resins for paper sizing and varnish, and a series of other products of established use and value. But the really new things—here may be the big surprise.

Dr. Brooks showed a large number of lantern slides illustrating the technical excellence of the industry and illustrating American methods of large scale, large unit operation; a gasoline working plant of 75 units costing about $225,000 each; and pipe stills distilling about 12,000 barrels of crude per day.

Development of Lacquers

A paper on "Development of Duco-Type Lacquers," by M. J. Callahan, chemical superintendent of the Parlin, N. J., plant of E. I. du Pont de Nemours & Co., follows:—

A recent writer in reviewing the progress of industrial chemistry over the past one hundred years calls attention to the fact that the greater part of this progress occurred in the last fifty years, and that by far the greatest growth of discovery and construction of chemical plants was incidental to the last quarter of the century. The lacquer industry is likewise an industrial chemical development of the last fifty years, and its greatest period of growth has occurred within the last ten. The development of the type of lacquer known as duco, and its successful adoption in many fields of finishing, was unquestionably the pioneer advance which has made possible the growth of the industry to its present day size.

Historical Developments

The basis for duco type lacquers is cellulose nitrate of the so-called solution type. The historical development of cellulose nitrate can be used therefore as a background for the development of lacquer. Described first by Schonbein, an Austrian, in 1845, early efforts were largely devoted to the application of the product for military purposes. A large amount of necessary knowledge regarding conditions of nitration and stabilization was developed and it may fairly be said that this laid the groundwork for the later adaptation in the fields of celluloid, photography and solutions. Since it is with solutions that the development under discussion is concerned, further references will be confined to this field.

It was early noticed that certain types of cellulose nitrate having a nitrogen value in the range below twelve and one-half percent were readily soluble in organic solvents such as acetone, ethyl acetate or mixtures of ethyl ether and ethyl alcohol, and that when such solutions were poured upon smooth surfaces a continuous film resulted. In the fifties, Scott Archer (2) made use of this property in wet plate photography and Alexander Parkes (3) called attention to the possibility of using it for obtaining protective coatings for wooden and metallic objects. No important industrial developments resulted immediately, however, due to the fact that films made from the solvents mentioned shrink badly on drying, tending to wrinkle and turn white. With the discovery of the value of amyl acetate in preventing these effects, real progress in solution development began.

In 1882, Stevens (4) obtained a series of patents in one of which amyl acetate was mentioned as a solvent for cellulose nitrate. With the advent of this solvent into the art, many of the difficulties which had prevented rapid development of the use of solutions for coatings were eliminated and the foundation for the present industry was laid. For the next thirty years a steady growth began. The number of experimentors in the field increased. Knowledge of the solubility factors of different types of cellulose nitrate was broadened, new solvents were found, and their methods of manufacture cheapened; methods of combining cellulose nitrate with various resins, vegetable oils, etc., were worked out. During the period also the uses of cellulose nitrate solutions were extended to the photographic industry, the leather industry, and the artificial silk industry. To a large extent, however, the chief field of application of solutions lay in their use as protective coatings in the form of lacquers, bronzing liquids, or enamels. In this field properly compounded cellulose nitrate solutions made a special appeal because of their quick drying quality, transparency, and brilliance of film, and their quality of giving protection in very thin films.

The first two decades of the present century were marked by a continuation of this slow but steady growth in the general use of lacquers, but at no time up to the period marked by the ending of the World War were there any indications that the lacquer industry was to become the influential factor in the field of protective coatings that in a space of five years has worked a complete revolution in methods and ideas of finishing.

Economic and Chemical Factors

With the ending of the World War, however, at least four factors, one economic and three of chemical significance began to operate, and a situation was thus created particularly suited to the development of a product such as duco. The economic factor was the expansion of the automobile industry. The tremendous speeding up of industrial processes that had accompanied war time production was transformed into peace time manufacturing, and this was particularly true of the manufacture of pleasure type automobiles. A large and growing market far below the saturation point existed for these machines, and the demand could only be met by increasing the capacity of existing manufacturing plants or by enlargement at the expense of new capital investment. A very vital link in the necessary program of increased capacity was the painting operation. In the painting of automobile bodies, protective coatings based on oleoresinous paints were used. The process was tedious and time consuming. Not only was the time factor excessive, but the process itself was inefficient due to the large percentage of marred finishes resulting from ordinary handling of the bodies in the factory and the difficulty of effecting repairs even of the most minor character. Reference to Table (1) indicates the multiplicity of operations that were necessary to produce the finish in use in 1920. Not only was the operation of producing the finish inefficient and costly, but the result obtained was entirely unsatisfactory from the standpoint of the consumer purchasing the machine. In the latitude of New York City the average durability in 1920 of a finish on an automobile of the medium price class (about two thousand dollars) was one summer. If purchased any time between October and April, the purchaser could be sure of failure of the finish by checking or crazing by the following September. This situation made changes in finishing methods and materials for automobile bodies imperative.

Simultaneously with the development of this economic and manufacturing situation, three factors of interest to the lacquer chemist and of equal importance had evolved. The importance of amyl acetate as a constituent of the solvent portion of lacquers to obtain smooth films and to prevent whitening or "blushing" had stimulated research in the solvent field, and over a term of years a large number of solvents had been investigated and studied. Some of these were from the standpoint of industrial lacquer use purely laboratory curiosities; but their properties and effects were known, and the chemist in the lacquer field was fully prepared to take advantage of any change in the situation, which would render any of the explored possibilities usable. A case in point and the first factor in the developing situation was the application of butyl alcohol to the lacquer industry. Normal butyl alcohol had accumulated in large quantities as a by-product in the manufacture of acetone by fermentation of corn. Normal butyl acetate was adaptable as a constituent of lacquers in the same manner as amyl acetate. There was thus available large supplies and an assured source of supply of a necessary solvent in lacquer manufacture. The duPont company had begun the use of butyl alcohol and acetate in lacquers a considerable period before the establishment of the butyl industry in the United States, supplies of the alcohol being imported from England, where the use of the fermentation process for production of acetone was then in use.

A second factor of chemical importance was the after war presence of tremendous quantities of cellulose nitrate in the form of smokeless cannon powder. In such form it was of no economic value to the country at large, and its storage and maintenance provided a hazard and a constant burden of expense to the government. This was a challenge to the chemist, which was accepted, and after several years of research methods of recovering and utilizing the cellulose nitrate of smokeless cannon powder were worked out, further assuring the lacquer industry of available and cheap sources of supply of a basic raw material.

A third factor of still greater importance was the development of knowledge that pigmented cellulose nitrate solutions could be applied to automobile bodies and a finish of vastly improved resistance to weathering obtained. Cellulose nitrate enamels were first applied to automobile bodies in refinishing work about 1916. The earliest development occurred in California, where a number of automobile refinishing shops made use of these

enamels applied directly over the old varnish finish, or over air dried oil type primers and fillers. While the results obtained were not entirely satisfactory from an automotive production standpoint, the striking and impressive durability of the finish under the severe climate conditions of the Pacific Coast pointed significantly toward the application of cellulose nitrate lacquers in the field of automobile body finishing.

Cellulose Nitrate of Low Viscosity

While all the factors enumerated conspired to hasten the adoption of lacquers for this purpose, it was still necessary to do considerable chemical research work in order to complete the development of duco type lacquer. Up to 1919, all lacquer products were based on cellulose nitrate, which in solution gave a relatively high viscosity. For this reason a single application of solution resulted in the deposition of very thin films. In order to obtain films of satisfactory durability, the application of from sixteen coats were necessary. Obviously it was necessary to produce lacquers with a more highly concentrated content of cellulose nitrate. This was accomplished through the discovery of methods of reducing the viscosity of the cellulose nitrate while still retaining film strength and durability, and applying these methods to the manufacture of lacquers.

A number of methods of producing low viscosity cellulose nitrate have been mentioned in the chemical literature. Essentially they depend upon the action of heat alone, heat in the presence of reagents at controlled alkalinity, or the action of ultraviolet light. In the modern lacquer industry, the first two methods only have found commercial application.

Reducing Viscosity

A German patent granted to Schulz (5) describes a method of stabilizing cellulose nitrate by boiling in water under pressure. A French patent to Delfrech (6) makes reference to a similar process, and a British patent to Chandelen discloses a treatment of fibrous celloise nitrate by heat and water under pressure to improve its solubility in organic solvents. The above references all occurred prior to 1913. While all disclose methods of treatment which will reduce the viscosity of the nitrate, there is no indication that the important bearing of this fact to the lacquer industry was recognized or in any way utilized. No doubt the need for lacquer products of high concentration was less urgent at that time, and the economic and chemical stage had not been set for the proper development of the product. No other references of interest appear until after the World War, when a patent was granted Carlson & Thall (8) for a process for reducing the viscosity of cellulose nitrate solutions by heating in closed vessels while Phillips in 1922 described a method of treating smokeless powder by heat and a nonsolvent under pressure, and the subsequent production of solutions of high cellulose nitrate content.

Heating of cellulose nitrate in solution as described by Carlson & Thall while capable of producing reduced viscosity products has obvious disadvantages of difficult operating procedure, accompanied by large losses of expensive solvents, and allows no provision for the removal of by-products in the form of nitric and nitrous acid, which result in small amounts from the reduction in viscosity. It has become general practice in the industry, therefore, to apply heat to the nitrate in the fibrous condition using as a starting material properly stabilized cellulose nitrate, such as have been in use in the explosive industry for many years.

Digestors or kiers similar to those used in the pulp industry are employed. A temperature of 110-115°C. is used and provision for maintaining a constant pH of the water in contact with the nitrate is provided. The reduction in viscosity is a function of both time and temperature. Practically all of the cellulose nitrate used by the lacquer industry in the United States, and known as one-half second cellulose nitrate is produced by this process.

Alkaline Methods

The second method of reducing viscosity through the use of slight alkalinity and lower temperatures has also found rather wide application particularly in the recovery of celluose nitrate from smokeless powder, its reduction in viscosity, and subsequent use in lacquers. In a United States patent granted to E. C. Pitman (10) is described a method of applying this process which has been in commercial use for a number of years, and has been used to produce a large proportion of the cellulose nitrate used as a basis for duco. Briefly described the process consists of the treatment of cellulose nitrate in a dispersed colloid state (smokeless powder) with a slightly alkaline alcoholic solution. An ordinary still kettle equipped with a reflux is used and the combined action of heat and akalinity result in very rapid decrease in viscosity of cellulose nitrate, while the alcohol serves to remove bi-product impurities, as well as the alcohol soluble portions of the powder. The marked similarity to the ordinary heating process is notable.

A patent granted Bacon and Wilson (11) describes a method of reducing the viscosity of cellulose nitrate solutions by submitting them to the action of ultraviolet light. This is surprisingly effective and while no application has been made commercially, it is of distinct interest from its bearing on theoretical study of the factors effecting durability of finishes based on cellulose nitrate. In passing it is well to mention that all of the processes described are based on the use of cellulose nitrate of high viscosity as a starting point. It is entirely possible by previous treatment of the raw cellulose to obtain a similar result. An example of this is the nitrate obtained by nitration of the cellulose regenerated from xanthate solution. This is similar in viscosity characteristic to the well known one-half second type.

Commercial Applications

Strangely enough, the discovery of methods of producing low viscosity cellulose nitrate did not lead to immediate application of pigmented solution for the painting of automobiles. The earlier applications were in the field of clear finishes for wooden objects, and furniture. In these fields the quick drying character of the finishes which led to adoption of rapid finishing schedules made a special appeal. In particular the hardness of the final finish, which did not "print" or mark under the pressure of the materials used in packing, nor mar or scratch in service of the furniture user, and finally which did check or craze on aging called attention to properties of coatings based on low viscosity cellulose nitrate, which indicated a wider usefulness, and the adaptation of the solutions to the general field of finishes was begun. Mention has already been made of the use of cellulose nitrate of high viscosity type in the type for refinishing automobiles in California. Application of the low viscosity type lacquers was immediately begun and for the three years preceding 1923, the lacquer industry devoted the larger part of all technical efforts to the solution of this problem.

In this development the cooperative efforts of the technical staffs of the General Motors Company and duPont Company were largely responsible for the success achieved. In 1920 the General Motors Research Laboratory undertook a study of various types of automobile finishes with the object of developing an improved system. This work was sponsored by Dr. Rettering and Dr. Clements and carried out very ably by H. C. Mougey. Early in the development, the technical staff of the cellulose products division of the duPont company began to contribute products based on cellulose nitrate, and the coordinated efforts of the two staffs led to the final product, duco, used at the present time as an automobile body colored finish over the entire world.

Properties of Finishes

Paint and varnish technologists had long been familiar with the defects of the older type of finishes based on oleoresinous materials, when exposed to out of door conditions. Briefly these consisted of checking or crazing, dulling when exposed to sunlight and moisture, softness with resultant scratching, not to mention the difficulties in application previously enumerated. These defects are largely a result of the chemical nature of such finishes, namely drying by oxidation. Varnish type materials depend largely for their durability on retention of flexibility, which necessitates the production of slow drying or slow oxidizing films. This type of film is soft initially, which results in easy scratching and dulling and is permeable to water. Furthermore, it is impossible to prevent oxidation proceeding at a rapid pace during life and the film ultimately embrittles on the surface and cracks or checks. By high pigmenting very flexible varnishes, it was possible to absorb ultra violet light and retard the embrittling and subsequent checking. The resultant product was dull in lustre, soft, and difficult to apply, so that automobiles finished in the system lacked the necessary appeal of style and beauty. It can readily be seen then that the varnish and paint technologist was impaled on the horns of a dilemma, and that the time was ripe for the introduction of new materials into the finishing of automobile bodies.

A modern lacquer such as duco is a resultant of the properties desired. The first requirement is durability under conditions of outdoor exposure. To be durable a lacquer should not change color, crack, or craze, peel, should not scratch readily, and should protect the underlying surface. A second requirement necessitates that it be capable of application with a minimum of labor, time, and cost of finishing materials. A third requirement is the production of a coating that is smooth, that has proper lustre and color so that the object coated will have necessary appeal of beauty and style.

The modern lacquer is much more than a solution of cellulose nitrate in organic solvents. Besides the nitrate, natural resins, vegetable oils, plasticizers, stabilizers and pigments are normally included. Resins commonly employed are dammar and ester gum. Recently certain synthetic resins of the Abertol and Glyptal types have found application. Vegetable oils commonly used are castor, linseed and tung. Plasticizers are the phthalates, camphor and camphor oils and triocresyl phosphate. Solvents are divided into several classes, depending on their rates of evaporation and aromatic hydrocarbons are commonly used for dilution and thinning purposes. The proper selection and balancing of these ingredients is the determining factor in the application of the lacquer and the properties of the finished film.

Durability

Durability under conditions of outdoor exposure in particular depends largely on the ratios of ingredients in the film. Use of cellulose nitrate of too low viscosity will result in lack of film strength followed by cracking and peeling. Too low a ratio of pyroxylin to other clear film ingredients will produce a finish that will check. Lack of adhesion of a finish is a result of a high ratio of cellulose nitrate to other film ingredients.

The effect of pigments on durability is especially marked. A clear film of cellulose nitrate is extremely sensitive to the ultra violet rays of the sun's spectrum, (12) and a clear film exposed for only a few days become soo brittle that it will not withstand mild bending without cracking. This is accompanied by a drop in viscosity of the cellulose nitrate. The use of oils and plasticizers will extend this life, but eventually failure will occur. However, if such a film be protected from the sun's rays by the use of opaque pigments, particularly when the film is applied to a rigid surface, such as steel, almost indefinite resistance to sunlight will result. The action of pigments appears to be specific. A pigment of the incorrect type will cause failure in a short space of time. A typical example of this is the failure induced by certain types of ultramarine pigments and colored lakes. Each pigment must therefore be studied separately. The ratio of pigment to clear vehicle is also important. If the content be too high, failure by cracking will result, and if this does not happen excessive chalking will result. If the content be too low, failure by checking will result very quickly. In the axis of abscissa are plotted percentage pigment content of a lacquer film by weight. The ordinate axis gives the failure by checking in cycles. The sharp break at which durability becomes satisfactory is notable. These results were obtained through the use of an accelerated test making use of the consecutive action of quarts mercury are radiation and water spray. In this way microscopic size checking, which tends to parallel outdoor failure, can be obtained. Durability concerns to a large extent the user of the automobile, who desires a smooth finish in a beautiful color, which will retain indefinitely these qualities. The automotive manufacturer is interested particularly in the second requirement given above, namely, application properties.

Application Properties

Solvents play an important part in effecting the working qualities of lacquers. The viscosity characteristic of the cellulose nitrate will largely determine the concentration of a lacquer at spraying viscosity, but this can also be effected by the choice of solvents. Materials such as ethyl acetate or acetone produce solutions of lower viscosity at the same concentration than their higher homologues. Fortunately, alcohols actuate the solvent power of esters and minimum viscosities with higher boiling acetates are possible through adjusted additions of alcohol. Usually a lacquer solvent combination is a complex mixture of low boiling esters and aromatic hydrocarbons with high boiling esters and alcohols. The low boiling esters serve to reduce viscosity and increase solids, the high boiling solvents assist in flow of the sprayed lacquer and prevent blush. In general automobile lacquers are applied over baked oil type undercoats. This is due to the better adhesive and filling qualities of these undercoats plus their greater economy. Satisfactory pyroxylin type undercoats have been developed, but have never found wide application.

A modern automobile lacquer can be applied with only three-minute air drying between coats. After the last coat the drying is continued at one hour at room temperature or fifteen minutes at 120°F., and the finish is then sanded and polished. "Orange peel" or spray wave is sanded out, and although this can be decreased by the use of large quantities of thinner, it has been found most economical to use the maximum of non-volative possible and to sand out the orange peel. The present tendency is toward higher solids lacquers than were in use in 1923, at the time of their adoption by the automotive factories.

The third requirement of a smooth finish of lustre and beauty is closely related to the methods of manufacture of a lacquer. The dispersion of pigments in a lacquer is a large factor in determining its ease of polishing. The more perfect the dispersion the more rapid a high gloss from polishing will result and the higher and better the finished lustre. This factor affects also the repair work in the finishing plant where spots marred by bump or rubbed too thin must be touched up. Lacquers have proven particularly adaptable for this purpose and have resulted not only in economies of operation in the manufacturing plants, but also to the large army of automobile owners in the larger cities, where traffic congestion and its resultant collisions result in frequent damage to the finish.

Growth of Use of Lacquers

Duco lacquer was first adopted for production use in the automotive industry in 1923. It was scarcely to be expected that the first lacquers used fulfilled in all respects the requirements outlined. However, it was a source of considerable surprise to the lacquer technologist to see to what an extent they were satisfactory.

Both the automotive manufacturer and the public purchasing the cars, after the first hesitant trials, recognized that an important advance in finishes had been made, and progress became extremely rapid. The use of lacquer spread into a large number of industrial fields other than the automobile industry. The use of clear lacquer for furniture has already been mentioned. In the last five years practically all types of furniture manufacturers have found the use of lacquer valuable and economical, even pianos, which require a very high-grade type of built-up finish, being now coated with lacquer. A large number of other industries, particularly those specializing in stamped metal parts, find lacqers particularly adapted for speedy economical finishing operations, and the production of a beautiful and durable coating on the completed product. Within the last three years brushing lacquers for use by the householder have appeared, and it is now possible to obtain products fulfilling the requirements of a finish for automobiles, which can be brushed on articles in every-day use in the home, without the necessity of discontinuing use for more than a few hours. This quick-drying quality added to the durability of these finishes, their resistance to wear, to washing and scrubbing, plus their possibilities for color decorative effects, have provided a permanent place for them in most households. In the field of interior decorating and architectural use lacquers have yet to make any marked entry. Products entirely satisfactory as regards durability have been produced, but the conditions surrounding application in this field are not capable of the rigid control exercised in factory type production, and it has not been possible to produce the economies that made adoption in the automotive field so rapid and complete.

Economic Results

The economic results of the development of duco type lacquers have been very broad and far-reaching, and represent an important contribution of industrial chemical research to general wealth. In 1919 there were less than ten manufacturing establishments engaged in the manufacture of cellulose nitrate solutions. The combined capitalization was probably less than $10,000,000. At the present time there are over two hundred concerns manufacturing lacquers in some type or form, and the combined capitalization is probably in the neighborhood of $60,000,000 The very rapid increase of production over the years immediately following 1923 is notable as indicating the profound influence exercised by the development of duco.

Such rapid industrial growth was founded upon a real economic contribution to industry in general, and no description of this development would be complete without some reference to economies which have resulted from the development and use of lacquer in various industries. Mention has been made of the time consuming operation of painting automobile bodies with oleo resinous paints. In the better class of passenger cars a painting schedule varying all the way from seven to fourteen days prevailed. As high as twelve coats, comprising seven different types of products were used. The use of duco type lacquers has cut the average finishing schedule for automobile bodies to not more than two days, and the products used to four or less, while the number of bodies in process has been reduced to 80 percent. In short, an automobile body can be completely finished from the metal up in one day, if desired. The economies resulting from such changes are, of course, hard to estimate. They have been chiefly in the nature of reduced capital expenditures for new painting facilities, and an increased capacity for installations in use. A large automobile manufacturing establishment estimated in 1925 that a capital expenditure of $1,000,000 and a floor space of 100,000 square feet had been saved by the adoption of lacquer. Undoubtedly similar expenditures were saved by other plants. It can also safely be stated that the tremendous mass production of automobiles in the types of body design that have prevailed over the last five years would have been practically impossible under the older systems of painting bodies.

Savings to Public

The savings to the general public, the purchaser of automobiles, has also been tremendous. In 1923 there were 13,540,000 registered passenger automobiles in the United States, of which about 2,000,000 were of the type which the owner would repaint. The rate of production of this type of car was about 800,000 cars per year. In general each of these cars would have to be repainted on an average of once every two years. The average cost of painting an automobile was $50. On the basis of the above figures there were probably 400,000 cars repainted each year at a total of $20,000,000, a saving which has been largely realized and which is due directly to this entirely chemical development. Despite the fact that the repainting of cars has been largely eliminated or at least greatly decreased, a whole chain of refinishing shops for application of the new lacquer finish has developed and now represents a considerable capitalization. These shops were at first chiefly employed in the refinishing of cars previously finished in oleo resinous paints. It was thought that this phase of the lacquer development would gradually pass out of existence as the manufacturer adopted the lacquer finish for automobiles. Notwithstanding the almost complete adoption of Duco type lacquers, the refinishing shops will continue to furnish an economic service, largely in touching up marred finishes and changing the color schemes of lacquer finished automobiles.

Not only in the automobile field has lacquer contributed economically, but other manufacturers have found that the substitution of lacquers for varnish type products has resulted in economies, even though the cost of materials used has been materially higher. One of the most striking examples is the experience of a large manufacturer of an internationally used calculating machine. Varnish which had been used as the finishing material had been the cause of much manufacturing difficulty and constant complaint and expense from marred cabinets. Adoption of lacquer resulted in elimination of all manufacturing delays, completely eliminated complaints and resulted in a net saving of over $10,000 per year. Other similar experiences could be cited to show the economic contribution of lacquer.

Mention should also be made of the diversion of several million pounds of smokeless powder from practically hopeless non-usefulness to a beneficial peacetime economic use, to the growth of the butyl alcohol industry directly attributable to lacquer, and to stimulation accorded the pigment and heavy chemicals industry, through increased use of acids, pigments and lakes.

Influence on Color and Style

No description of the development of lacquers would be complete without calling attention to the contribution of lacquer to the increased use of color on manufactured articles. H. Ledyard Towle, formerly color advisory director of the duPont company, has called this development "the American Renaissance." Working in conjunction with Mr. Towle, the technical staff of the cellulose products division made it possible to translate the color of his artists' palette to successive batches of lacquer of any quantity from a pint to thousands of gallons. The results of this work are now seen in the flashing brilliant color combinations that pass on the highways, and which have helped greatly to stimulate public interest in color and its use.

Stimulation of Research

The growth of the lacquer industry has also served to catalyze activity in a number of related chemical fields. The oleo resinous paint and varnish industry felt the first impact of the new products in the rapid replacement by lacquers of paint and varnish in the automobile field, furniture field and other similar industries. Stirred to a hitherto neglected interest in the value of chemical research, the paint industry in general has broadened to a very marked extent its laboratory and research facilities, and already results in the form of improved products are making their appearance in the industry. Among such may be mentioned paint enamels of very much increased speed of drying, quick drying furniture varnishes and more rapid baking automobile undercoats.

The number of solvents available for use in lacquers has also been broadened by the development of new synthetic products whose production is a direct result of the demand created by lacquers. In 1923 the best and practically only organic solvent available for use in spray lacquers was butyl acetate. Within the last three years amyl acetate synthesized from the pentanes of casinghead gas, and the ethers of ethylene glycol synthesized from ethylene, have been developed and placed on a manufacturing basis. The butyl and amyl esters of propionate acid have also made their appearance. All of these solvents can be used successfully in lacquers, and the lacquer technologist is no longer dependent upon butyl compounds alone.

The startling success of lacquer has served to stimulate a search for improved substitutes for the natural resins first used in lacquers and also for the possibility of replacing cellulose nitrate itself. The field of synthetic resins is being combed as never before and investigators are working feverishly in hopes of a discovery that will be the basis of another revolution such as was accomplished by lacquer. The use of albertols, rosin modifications of phenol-formaldehyde resins, is one result of this work. Glyptals, the general name for a whole class of synthetic resinous materials prepared by interaction of polyhydric alcohols such as glycerin and glycol, with monobasic acids such as phthalic anhydride, rosin and vegetable oil acids have been prepared in numbers of different combinations and are being used in both lacquers and varnishes with considerable success. Interest in other derivatives of cellulose has been intensified and lacquers having as a basis cellulose acetate and the benzyl ether of cellulose have made their appearance, although to date no extensive usefulness for them has been developed All of these have developed since 1923 and are without question outward manifestations of the stimulation of chemical research provoked by the development of duco type lacquers.

At the present time lacquer in the sense of a product that dries by evaporation of solvents appears to have established a permanent place in the field of finishes for manufactured articles. A slow and steady growth will probably continue as newer uses develop. The spectacular development period is undoubtedly over, but with the tremendous activity in chemical research to which allusion has already been made, new discoveries of importance will probably serve to bring about radical changes in the components which now play such important roles in the lacquer field. Cellulose nitrate, while now firmly established, may be supplanted by another synthetic colloid body. New and cheaper solvent combinations will appear. The lacquer industry is well aware of this trend and the more important companies are shaping their business and technical policies accordingly. An industry which has the example of the revolutionary results introduced by duco type lacquers has little need for further incentive to keep alert and intensively at work.

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Table I

(COMPARISON OF CELLULOSE-NITRATE AND OLEORESINOUS SYSTEMS FOR FINISHING AUTOMOBILES)

	Duco.	Varnish.
Time required to complete one job .....Days	2	7-9
170 men required to produce per day .....Bodies	—	125
150 men required to produce per day .....Bodies	300	—
Plant capacity .....Per day	600	300
Time required (hrs.) to complete one job.....Hours	13.5	336
Labor time per body....Hours	5.72	6.73
Material cost per body..Value	$2.26	$2.33
Floor space required 300 bodies per day .....Sq. ft.	—	101,400
Floor space required 600 bodies per day.....Sq. ft.	73,300	—
Number of bodies in process for production of 300 bodies per day	600	2,400
Rejects per day	2%	20%

(Continued on page 73)

Sulphate of Ammonia

The Barrett Company 40 RECTOR ST., NEW YORK

SYNTHETIC NITROGEN

A Form For Every Need
AMMONIA — NITRATE — ORGANIC
Leunasalpeter—26% N (31.6% NH_3)
Sulfate of Ammonia—20.6% N (25% NH_3)
Calcium Nitrate—15% N (18.2% NH_3)
Calurea—34% N (41.3% NH_3)
Urea—46% N (55.9% NH_3)
Nitrate of Potash—13% N (15.5% NH_3), 44% K_2O

Nitrophoska
In Four Grades for Base Goods
No. 1 15 - 30 - 15
No. 2 16.5 - 16.5 - 20
No. 3 15.5 - 15.5 - 19
No. 4 15 - 11 - 26.5
Above Analyses are Nitrogen, Phosphoric Acid and Potash

Wire for Quotations
SYNTHETIC NITROGEN PRODUCTS CORPORATION
285 Madison Ave. *Sole Importers* New York, N. Y.
"It's Nitrogen from the Air"

Sulphur

99½% Pure

DAILY PRODUCTION

3,000 TO 4,000 TONS

TEXAS GULF SULPHUR CO.
41 E. 42nd Street New York City
Mine: Gulf, Matagorda County, Texas

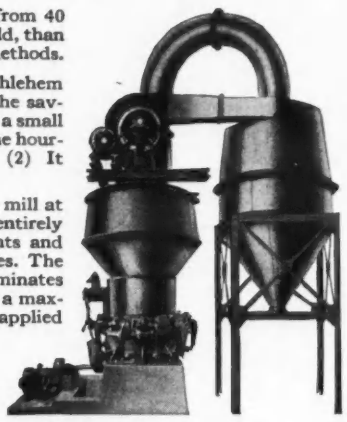
Why the Bethlehem Pulverizer Saves 40 to 50% Power

The Bethlehem Pulverizer consumes from 40 to 50 per cent less power per ton of yield, than that required by ordinary pulverizing methods.

The two important features of the Bethlehem Pulverizer, which are responsible for the saving in power are: (1) It has at all times a small quantity of material (less than 1% of the hourly capacity) on the grinding table. (2) It operates at a very slow speed.

By reason of the small quantity in the mill at any given time, the material is ground entirely by the action of the grinding elements and not by friction between its own particles. The slow speed of operation of the mill eliminates all other unnecessary friction and thus a maximum percentage of the power input is applied to useful work. No power is wasted in generating heat.

The consequent low temperature maintained in the Bethlehem Pulverizer is an advantage in grinding products whose physical or chemical properties might be affected by abnormal temperatures during pulverization.



The complete Bethlehem Pulverizer Unit with its fan over the top of the mill and cyclone collector at right

A copy of catalog J, describing the Bethlehem Pulverizer in detail, will be sent on request.

BETHLEHEM STEEL COMPANY, *General Offices: BETHLEHEM, PA.*

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Bethlehem Steel Export Corporation, 25 Broadway, New York City
Sole Exporter of Our Commercial Products

BETHLEHEM PULVERIZER

Fertilizer Materials

Blood Market Again Lower—Fish Scrap Declines Under Heavier Offerings—Soda Nitrate Position Continues Easy

Trading in fertilizer materials continued rather light last week, and the price trend was downward. Reductions were made in quotations on blood and fish scrap, the remainder of the market holding unchanged.

Interest in the new selling arrangement of Chilean nitrate of soda producers continued a feature of the market last week. In some quarters, the centralization of all sales activities is seen as a forerunner to possible Chilean participation in a world agreement on nitrogen. Last year efforts were made by European interests to reach an agreement with Chilean producers of nitrate regarding production and sales, but nothing came of this attempt. Should the efforts to arrive at an understanding be resumed, the Chilean producers, through their organization, are now in much better position to protect their own interests and secure unified action in a producing or marketing plan. The only important interests in Chile which have not gone into the central selling agency are the two American companies, representing in the aggregate a little less than 16 percent of the total current production. The Chilean Government has announced that in the event that the market price of Chilean nitrate falling below 17s. per metric quintal, a bounty sufficient to bring the sales price up to this amount will be allotted producer-members of the association by the Government. Companies outside of the central selling agency, however, will not be eligible to receive this rebate. Thus far, developments in Chile have failed to strengthen the position of nitrate in this country. On the contrary, the markets have been rather easy during the past month, and show continued softness. This situation is due in large measure to the present off-season and is attributed in some measure to uncertainty regarding the extent of the competition which may be expected from the domestic synthetic product next year.

Fertilizer manufacturers as yet have not come into the market in a large way for ammoniates for their fall and spring requirements. A good amount of contract business on domestic sulphate of ammonia has been written, but aside from this buying, and some contracting for foreign ammoniates, the market has been rather neglected.

In connection with the congestion which often delays the movement of mixed goods at the height of the shipping season, an investigation which the American Railway Association has conducted into fertilizer car loading is of interest. Loading fertilizer materials at South Atlantic and Gulf ports has been the subject of a check by the Car Service Section of the Association during portions of the fall season of 1928 and the spring season of 1928. The object of the survey was to determine the extent to which cars are loaded to capacity. A resume of the check is furnished by the following figures:—

	Total cars included in check.	Estimated saving in cars if capacity loading had been followed.
New Orleans	272	12
Gulfport	118	5
Mobile	600	34
Pensacola	422	17
Jacksonville	61	1
Brunswick	216	15
Savannah	561	4
Charleston	277	11
Wilmington	730	38
	3,257	137

Of the total shipments included in the check, the association reports, 1,107 cars contained materials consigned to fertilizer factories, and 2,150 contained materials consigned to jobbers and retailers. Report of the Car Service Section does not separate the "Estimated Car Savings" between cars containing shipments for fertilizer factories, and those for jobbers and retailers.

It is well recognized, the association points out, that capacity loading of cars results in economies to the railroads. Fewer cars are required than when cars are not loaded to capacity; less track space is consumed at loading point and at destination, and necessarily the railroads' operating expense reflects the fewer cars handled. Loading of fertilizer material at the ports, whether taken from store or handled direct from ship, is largely in the hands of the carriers or the public terminal operators. However, fertilizer manufacturers are afforded an opportunity for cooperation where fertilizer materials are handled over their private wharves, and by placing orders in large enough units to permit the loading of cars to capacity.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
None.	Blood, spot, dried, 5c. per unit. high-grade ground, f.o.b. Chicago, 25c. per unit. Fish scrap, dried, f.o.b. factory, 25c. per unit. wet acidulated, f.o.b. factory, 25c. per unit.

Current prices on fertilizer materials, formerly printed on page 12, are now printed at the end of this market report.

Comparative Values

Index numbers compiled from four typical fertilizer materials on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
97.2	97.2	97.6	99.2

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Ammoniates

Nitrate of Soda.—There was a quiet market for spot soda nitrate last week, but offerings were rather light, and prices held steady at $2.10 to $2.12½ per 100 pounds, with the latter quotation the asking price in most instances. The Aconcagua is due from Chile today with a cargo of nitrate, and importers are showing easier price views on this nitrate. Offerings at $2.10 from the Aconcagua's cargo was reported, and it was intimated that sellers might even go under this figure on prompt shipment nitrate. The market for later positions held steady, but trading was light. Importers expected that the market would liven up some this week, after the trade has had an opportunity to digest the Government crop report, issued September 8.

LONDON, Aug. 28.—Trading in soda nitrate has picked up a little since the announcement of the selling prices and conditions of the producers' association. The scale of prices includes rebate allowances ranging from 2 percent for buyers of 100 tons, 3 percent for 500 tons, 3¼ percent for 2,000 tons, and 3½ percent for 5,000 tons or more. Consignments may be made by producers to their own organizations in Europe or to distributors approved by the association. It is understood that the special concessions which the Chilean Government have promised to make to producers will be available only to members of the producers' association selling corporation. The Anglo-Chilean Consolidated Nitrate Corporation, representing about 13½ percent of the present production, and the Grace Nitrate Company, which represents about 2¼ percent of present production, are not in the sales corporation. A summary of the statistical position of the market by Aikman follows:—

Production figures for July were cabled as follows:—

	Tons 1928.	1927.	1926.
Production, July	*260,000	125,000	157,000
Stocks in Chile July 31	741,000	882,000	1,244,000

* 69 oficinas working.

The production of Maria Elena for July was advised as 29,800 tons.

The shipment figures for the first fortnight of August are as follows:—

Shipments to—	Tons 1928.	1927.	1926.
Europe and Egypt	73,000	68,000	14,000
United States	22,000	39,000	15,000
Japan and other countries	10,000	17,000	1,000

Freights have been quieter, but rates have remained steady. Three tramp steamers are reported fixed, one on the basis of 26s. Bordeaux-Hamburg for September-October and two for November loading at 26s. 6d. and 26s. 9d., respectively, basis Bordeaux-Hamburg. August-September liner space is reported fixed at 19s. to 22s. 6d., and October-March at 27s. 6d. Two November loading tramps for the United States were chartered at $4.75 and $5.

Sulphate of Ammonia.—Firmness

Valuable information on Imports and Exports of Fertilizer Materials is given in port lists beginning on page 5.

featured the position of the ammonia sulphate market last week. Domestic production was moving readily against standing contracts, and there was comparatively little spot material available. Producers continued to quote bulk sulphate at $2.40 per 100 pounds, delivered in either Northern or Southern markets, but resale material was reported commanding a premium of 5c. per 100 pounds over this figure. Producers were out of the market on export sulphate of ammonia, and reported that they would quote only on special inquiry for later positions. Last sales were reported made at $2.35 per 100 pounds, in single or double bags, f.a.s. New York.

LONDON, Aug. 28.—Conditions have remained unchanged. A good export inquiry is reported, with sellers quoting the market at £9 11s. 6d. per ton, in double bags, prompt shipment, f.o.b. United Kingdom ports. Business with the home trade is fair, with the market quoted at £10 per ton for August delivery, the quotation rising progressively to £10 13s. per ton for February-June delivery, on neutral quality sulphate, basis 20.6 percent nitrogen, delivered, carriage paid, to buyer's nearest wharf or station, in lots of 6 tons or over.

Cottonseed Meal.—Buyers were not in the market to any extent, and in view of the wide differential between spot material and meal for later delivery, not much trading is anticipated until current quotations are readjusted downward in line with new crop prices. Sellers continued to quote 7 percent meal, in bags, at mills, at $45 to $46 per ton for prompt shipment, futures ranging $32 to $34 per ton.

Blood.—Continued softness was reported in last week's trading. Spot blood was 5c. per unit lower at $4.70, with high grade at Chicago off 25c. at $4.50 per unit. The market on South American blood, September shipment, was quiet and unchanged at $4.95 per unit.

Fish Scrap.—With the factories reporting a heavy catch during the past few weeks, the supply of scrap was more liberal, and the market again weakened during the past week's trading. Dried scrap was 25c. lower at $5.00 and 10c. per unit, at factories, with wet acidulated 25c. down at $4.25 and 50c. per unit, f.o.b. factories. Fishing during the past week was not so successful, however, weather conditions down the Chesapeake and outside the Virginia capes being unfavorable.

Nitrogenous.—Trading had slackened somewhat, fertilizer mixers not being in the market for stocks in a large way. Importers continued to quote $3.85 per unit, in bags, for the 8-10 percent ammonia grade, September shipment, c.i.f. ports.

Tankage.—Fertilizer manufacturers were showing little interest in offerings for prompt shipment, and the market was a quiet affair throughout the week. There were no price changes recorded during the period.

Phosphates

Business had shown a little improvement in the phosphates group last week, but fertilizer mixers were not yet in the market in a large way for materials for their fall operations. A steady undertone prevailed in all branches, however.

Bone Materials.—Reports from Chicago indicated a moderate movement, with most of the buying being done by manufacturers of mixed feeds. Fertilizer manufacturers were not showing much interest in bone, and prices on fertilizer grades showed no changes.

Phosphate Rock.—There was a good demand for Florida rock for shipment on standing contracts, and the market was well maintained on all grades. Acid makers were drawing stocks in large quantities, and were expected to increase their takings as the season progresses.

Superphosphate.—The recent price advances had failed to slow down buying any, and there was a good demand reported throughout the week. Producers continued to hold the market at $10 per ton for the run-of-pile material, basis 16 percent, with the guaranteed 16 percent, milled and screened material, quoted at $10.50 per ton, both in bulk, f.o.b. Baltimore. Total production of superphosphate by domestic makers in July was 293,250 tons, against 236,221 tons in July 1927. Stocks on hand July 31 were 923,374 tons, as compared with holdings of 1,065,829 tons on the same date last year.

Potashes

Inquiry for potash for shipment from abroad had subsided somewhat last week. Importers bought rather heavily for September shipment, and are expected in the market again in a large way later in the month to contract for October shipment material.

American sales agents for the German and French syndicates were booking some business on potash afloat for Atlantic Coast ports, and in addition were carrying some spot material in warehouses at principal distributing points to take care of prompt shipment business.

Sulphur and Pyrites

Demand for sulphur was well maintained throughout the week and the market continued in steady position during the period. Producers were quoting $18 to $19 per ton, bulk, at mines, and $22 to $23 per ton, bulk, ex-vessel, Atlantic ports.

There were no changes reported in the pyrites division of the market. A good movement on contract continues, and prices remained steady.

Current Prices

(For late price changes, see page 2)

Ammoniates

(Unit is 1 p.c. of ammonia in 1 ton)

Ammonia sulphate, domestic, delivered Northern markets, bulk	100 lbs.	2.40	@ 2.45
Southern markets, bulk,	100 lbs.	2.40	@ 2.45
Ammonium sulphate, f.a.s. New York, double bags	100 lbs.	No prices	
single, bags	100 lbs.	No prices	
imported, synthetic, bulk, c.i.f. Northern ports	ton	No prices	
c.i.f. Southern ports, bulk,	ton	No prices	
Ammonia sulphate-nitrate, 26 p.c. nitrogen, 31.6 p.c. ammonia, imported, Northern ports, bags	ton.	57.60	@ —
Southern ports, bags	ton.	58.35	@ —
Blood, domestic, dried, 15@17 p.c. ammonia	unit	4.70	@ —
high-grade ground, 16@17 p.c., f.o.b. Chicago, bulk	unit	4.50	@ —
imported, Sept. shipment	unit	4.95	@ —
Cottonseed meal, 7 p.c. ammonia, mills, bags	ton.	45.00	@46.00
futures	ton.	32.00	@34.00
Fish scrap, dried, 11@12 p.c. ammonia and 15 p.c. bone phosphate, factory, bulk	unit	5.00	& .10
ground, 11@12 p.c. ammonia, 15 p.c. bone phosphate, f.o.b. Baltimore, bags	ton.	76.00	@ —
wet acidulated, 6 p.c. ammonia, 3 p.c. phosphoric acid, factory, bulk	unit	4.25	@ .50
Hoofmeal, f.o.b. Chicago	unit	4.00	@ —
imported, to arrive	unit	3.90	@ —
Lime nitrate, 15½ p.c. nitrogen, 28 p.c. lime, imported, Northern ports, bags	ton	No prices	
Southern ports, bags	ton	No prices	
Lime-urea, 34 p.c. nitrogen, 41.3 p.c. ammonia, 100-kilo bags, gross for net, car lots, Northern ports	ton.	82.00	@ —
Southern ports	ton.	82.75	@ —
Nitrogenous, 8@10 p.c. ammonia, bags, September shipment, c.i.f.	unit	3.85	@ —
Soda nitrate, bags	100 lbs.	2.10	@ 2.12½
Sept.	100 lbs.	2.12½	@ —
Oct.-Nov.-Dec.	100 lbs.	2.15	@ —
Jan.-June	100 lbs.	2.17½	@ —
synthetic, domestic, equal monthly quantities, January-June, 1929, bags, ports.	100 lbs.	2.17¼	@ —
bulk, ports	100 lbs.	2.07½	@ —
Tankage, domestic, concentrated, 14 to 15 p.c., f.o.b. Chicago, bulk	unit	4.25	@ —
garbage, f.o.b. Chicago, bulk,	ton	5.00	@ 6.00
ground or screened, 10@15 p.c., bulk	unit	4.65	& .10
unground, bulk	unit	4.40	& .15
11@15 p.c., f.o.b. Chicago, bulk	unit	4.25	& .10
South American, to arrive	unit	5.00	& .10

Phosphates

(Quotations per ton, in bulk)

Acid phosphate (see superphosphate).			
Bones, raw, ground, 4½ p.c. ammonia, 50 p.c. phosphate, f.o.b. Chicago		42.00	@ —
South American, to arrive		38.00	@ —
steamed, ground, 1¼ p.c. ammonia, 60 p.c. phosphate, f.o.b. Chicago		28.50	@30.00
unground, soft, f.o.b. Chicago		26.50	@27.00
South American, to arrive		34.50	@ —
Bone meal, steamed, ground, domestic, 3 p.c. ammonia, 50 p.c. phosphate		34.00	@ —
f.o.b. Chicago		30.00	@34.00
unground		28.00	@30.00
Phosphate rock, Florida, high-grade, hard, 77 p.c., mines		6.50	@ —
land pebble, 68 p.c. minimum, mines		3.10	@ 3.25
70 p.c., mines		3.75	@ 3.90
72 p.c., mines		4.25	@ 4.35
basis 75 p.c., 74 p.c. minimum, mines		5.25	@ 5.50
75 p.c. minimum, mines		5.75	@ —
basis 77 p.c., 76 p.c. minimum, mines		6.25	@ —
Tennessee, 72 p.c., mines		5.00	@ —
75 p.c., mines		5.50	@ —
Superphosphate, basis 16 p.c., f.o.b. Baltimore		10.00	@ —
guaranteed 16 p.c., f.o.b. Baltimore		10.50	@ —

Potashes

Kainit, 12.4 p.c., bags	ton.	12.00	@ —
bulk	ton.	9.00	@ —
14@16 p.c., bags	ton.	12.50	@ —
bulk	ton.	9.50	@ —
Manure salts, 20 p.c., bags	ton.	15.40	@ —
bulk	ton.	12.40	@ —
30 p.c., bags	ton.	21.75	@ —
bulk	ton.	18.75	@ —
Muriate, 80@85 p.c., basis 80 p.c., bags	ton.	36.40	@ —
bulk	ton.	34.80	@ —
Potash-magnesia sulphate, 48@53 p.c., basis 48 p.c. (double manure salt), bags	ton.	27.25	@ —
bulk	ton.	25.65	@ —
Sulphate, 90@95 p.c., basis 90 p.c., bags	ton.	47.30	@ —
bulk	ton.	45.70	@ —

Bagged salts sold on foreign weights, tares and analyses; bulk on American weights and foreign analyses.

The following discounts are offered:—On orders prior to September 1 for September shipment, 5 percent; October 1 for October shipment, 4 percent; November 1 for November shipment, 3 percent; December 1 for December shipment, 2 percent.

Prices guaranteed against decline up to April 30, 1929.

Sulphur and Pyrites

Brimstone, crude, car lots, mines, bulk	ton.	18.00	@19.00
ex vessel, Atlantic ports, bulk,	ton.	22.00	@23.00
Pyrites, Spanish, c.i.f. Atlantic ports, bulk	unit-ton	.13	@ .13¾

Atlanta Fertilizer Market

ATLANTA, Sept. 6, 1928.

The prices for superphosphate for interior Georgia points were put out by manufacturers on September 1. They are approximately the same as last year with slight, different schedule of season's advances. Savannah, Ga., manufacturers have also issued their schedules. Prices for 16 percent superphosphate for Atlanta and other interior Georgia points are as follows:—September, October and November, $11.46 per ton; December and January, $11.86: February, March and April, $12.26. The "run of pile" quotations are 68½ cents, 71 cents, 73½ cents per unit for similar periods.

In the Savannah markets the quotations on 16 percent superphosphate are:—September, October, November, $10.50 per ton; December and January, $10.90 per ton; February, March and April, $11.30 per ton. The unit basis "run of pile" is 62½ cents, 65 cents and 67½ cents for similar periods.

Cottonseed meal has entered as a factor in the fertilizer materials market. Quotations at interior mill points are now on a $33 per ton basis for 7 percent goods, October. This begins to look attractive to fertilizer manufacturers who are waiting to see if the price will go any lower. Cottonseed meal is thereby weakening the market for other ammoniates, especially organics.

Onl, light trading is reported in southern markets. The cotton crop and cottonseed meal outlook are both causing southern manufacturers to wait and see what the outcome may be.

The quotations of this market are as follows:—

SUPERPHOSPHATE—16 percent, $11.46 per ton interior Georgia points.

NITRATE OF SODA—$2.17½ per hundred at ports.

SULPHATE OF AMMONIA—$48 to $49 interior southeastern points.

AMMONIUM SULFATE NITRATE—$58.35 per ton, southern ports

CALCIUM NITRATE—Southern ports, $43 per ton ex vessel.

LIME UREA—$82 per ton, ports.

COTTONSEED MEAL—October, $33 per ton, mill points.

TANKAGE—Nominally $5.10 per unit ammonia and 10 cents BPL.

BLOOD—Nominally $5 per unit ammonia at southern ports.

NITROGENOUS—$3.90 to $4 per unit ammonia at southern ports.

POTASH—At importers' schedule.

Baltimore Fertilizer Market

BALTIMORE, September 6, 1928.

Developments in the crude fertilizer material situation during the last week have not been of a striking charcater. The trade, in fact, has proved decidedly quiet, with the manufacturers of mixtures disposed to hold back on commitments until they see just what the results of the new shipping season will be. So far the demand for mixtures has lagged, in the first place, because of the exceedingly moist weather in the South, which is retarding the maturing of crops and the gathering of harvests to a material degree, and in the second, for the reason that farmers have encountered serious disappointment in their expectations regarding some harvests. The potato growers of the Maryland and Virginia peninsula, for instance, have made a loss on their yield, for it so happened that the Southern sections that produce tubers in large quantities had unexpectedly large crops, which proved to be late and divided demand with the Maryland and Virginia production. Despite the quiet in the market for crudes, however, there is no weakness in the values, the sellers holding out for the figures that have prevailed, so that there is almost no change to be recorded. The nitrate situation presents its uncertainties, to be sure, with the invasion of synthetic products becoming more and more of a problem. The superphosphates are holding the advance in the quotations. The menhaden fishing down the Chesapeake Bay has been poor during the week because of northeast gales and heavy rains. Moreover, the interjection of an extra holiday took so much time off from the efforts of the salesmen. It is not recorded that any sales were made during the week, the fish factories still being engaged with the task of filling the orders taken prior to the opening of the season on a when-and-if-made basis. So far there has been very little chance to book new business.

Quotations are as follows:—

FISH SCRAP.—A firm tone is being noted in the market, with $3.25 and 10 the figure set per unit, at factory.

TANKAGE.—Little of this ammoniate is actually moving, since the manufacturers of mixtures have few, if any, actual needs to take care of, and the outlook is too uncertain to give them confidence. The current figure mentioned is $4.75 and 10 for 11 and 15 high grade ground stocks, c.a.f. basis Baltimore, per unit.

BLOOD.—Nothing has developed that might have caused an appreciable modification of conditions in this material, which is held at $5 per unit for high-grade ground goods, c.a.f. basis Baltimore.

SUPERPHOSPHATE.—The quotations which went into effect last Tuesday are 62½ cents bulk for run of pile, with flat 16 percent, $10.50, flat 18 percent, $11.90 and flat 20 per cent $13.40 per ton.

NITRATE OF SODA.—With the trade stated to be very quiet, and the situation uncertain because of the offers of synthetic materials, the quotations are at $2.15 per 100 pounds for October, November and December, and at $2.17½ after that in 100 ton lots. Carload business calls for some advance.

NITROGENOUS MATERIAL.—This product is still being held at $4 per unit, with the amount of business done not of impressive proportions.

GARBAGE TANKAGE.—A fairly steady market is reflected in the nominal figure of $3.25, 10 and 70 per unit.

SULPHATE OF AMMONIA.—The prices mentioned remain at $44 per ton for shipments on orders covering a year with delivery in equal monthly installments, with $45 for a seven months' period in equal monthly installments and $46 for four months in equal monthly installments.

POTASH.—The most notable development in the situation as regards this material was the arrival of two vessels with rather large shipments intended for delivery under contract to big buyers. The quotations remained the same, except that with September 1 the discounts previously allowed came off.

BONE.—Nothing has occurred to change the figures for this ammoniate, which remain at $33 to $34 for 3 and 50 ground steamed stocks and at $37 to $38 for 4½ and 50 ground raw supplies.

Chicago Fertilizer Market

CHICAGO, Sept. 6, 1928.

Prices on various grades of blood in the Chicago fertilizer market worked toward improvement, with higher quotations on several grades. The demand was coming through somewhat better. Better tankage material also was taken readily at somewhat higher prices. Sellers found little hesitancy on the part of buyers, although dealings in the aggregate were somewhat smaller than expected. There was little or no change in the situation as to bone materials, and the market for those products was dull.

Ruling prices were:—

BLOOD (per unit of ammonia).—High grade, ground and unground, $4.50 to $4.75; unground, suitable for feeding, 11 to 12 percent, $4.50 to suitable for feeding 11 to 12 percent, $4.25 to

TANKAGE MATERIAL (per unit of ammonia).—High grade, ground, $4.25 asked; unground, $3.10 to $3.25; hoof meal, $4 nominal; liquid stick, $3.50 to $3.75; unground bone tankage, per ton, $24 to $25.

BONE MATERIALS (per ton).—Ground steamed bone, $28.5 to $30; unground steamed bone, $26.50 to 27; raw bone meal, $35 to $40; cattle jaws, skulls and knuckles, $41 to $42; rejected manufacturing bones, $45 to $50; grinding hoofs, pigs' toes and waste horn materials, $40 to $45; junk and hotel kitchen bones, $27 to $28; pork cracklings, soft pressed, $85 to $87.50; beef cracklings, soft pressed, $50 to $55; hard pressed cracklings, per unit of protein, $1 to $1.05.

GARBAGE TANKAGE (per ton).—$5 to $6.

Paul Alexander, of Wessel, Duval & Co., this city, is on a business trip to Europe. He is expected back early in October.

T. G. Sinclair, manager for the Meridian Fertilizer Company, Shreveport, La., recently made a hole in one on the country club golf course there. His ace was scored on the three-par thirteenth hole.

Charles M. Struven, jr., of Charles M. Struven & Co., fertilizers, Baltimore, and Miss Anne Stone, also of Baltimore, were married September 8, at the Mount Vernon Methodist Episcopal Church, at Hampden.

German exports of sulphate of ammonia amounted to 302,083 metric tons, valued at 62,300,000 marks, in the first half of 1928. This compares with 195,752 tons, valued at 44,400,000 marks, exported in the corresponding period of 1927.

Polish producers of super-phosphate have strengthened their cartel and extended the time of its existence. The main purpose of the agreement is to organiz domestic sales and to secure uniformity in prices for all parts of the country.

C. Wilbur Miller, president of the Davison Chemical Company and Silica Gel Corporation, Baltimore, went on another trip to Europe last week, expecting to be gone a month or more in connection with the foreign business of the two corporations.

W. Duehrssen, who has charge of the Chicago office of N. V. Potash Exports My, was in Baltimore last week and renewed acquaintance with various members of the fertilizer material trade, with whom he had come in contact when he was stationed in Baltimore.

The Public Service Commission of New York State has approved an amendment to the tariff of the Long Island Railroad on fertilizer, carload, from Jamesport to stations on its lines, applying new commodity rates and effecting reductions from class rates. It becomes effective September 26.

SULPHATE OF AMMONIA
NEW ENGLAND FUEL AND TRANSPORTATION CO.
250 Stuart Street Boston, Mass.

The Davison Chemical Company
Established 1826
SULPHURIC ACID
50° 60° 66°
ACID PHOSPHATE
SUPERPHOSPHATE
DOUBLE SUPERPHOSPHATE
Main Office—Garrett Building
BALTIMORE MARYLAND

Chilean Nitrate of Soda
EDUCATIONAL BUREAU
57 William Street
New York, N. Y.

COOPER GUARANTEED PRODUCT

Solvent Naphtha
Benzol
Toluol

Liquor Cresolis Compositus, U. S. P.
Saponified Cresol, Pale Cresylic Acid

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Chicago, Illinois	W. E. Lape, 1909-25 Clifton Ave.
Detroit, Mich.	Baker & Collinson, 6545 Georgia Ave.
Cleveland, Ohio	Henry L. Grund Co., 416 Bulkley Bldg.
Akron, Ohio	R. A. Sperry, 134 E. Miller Ave.
Indianapolis, Ind.	H. T. Van Ness, 560 Dorman St.
Cincinnati, Ohio	Globe Chemical Co., Murray Rd. and Big 4 R. R.

WILLIAM COOPER & NEPHEWS
INCORPORATED
1909-25 CLIFTON AVE., CHICAGO, ILL.

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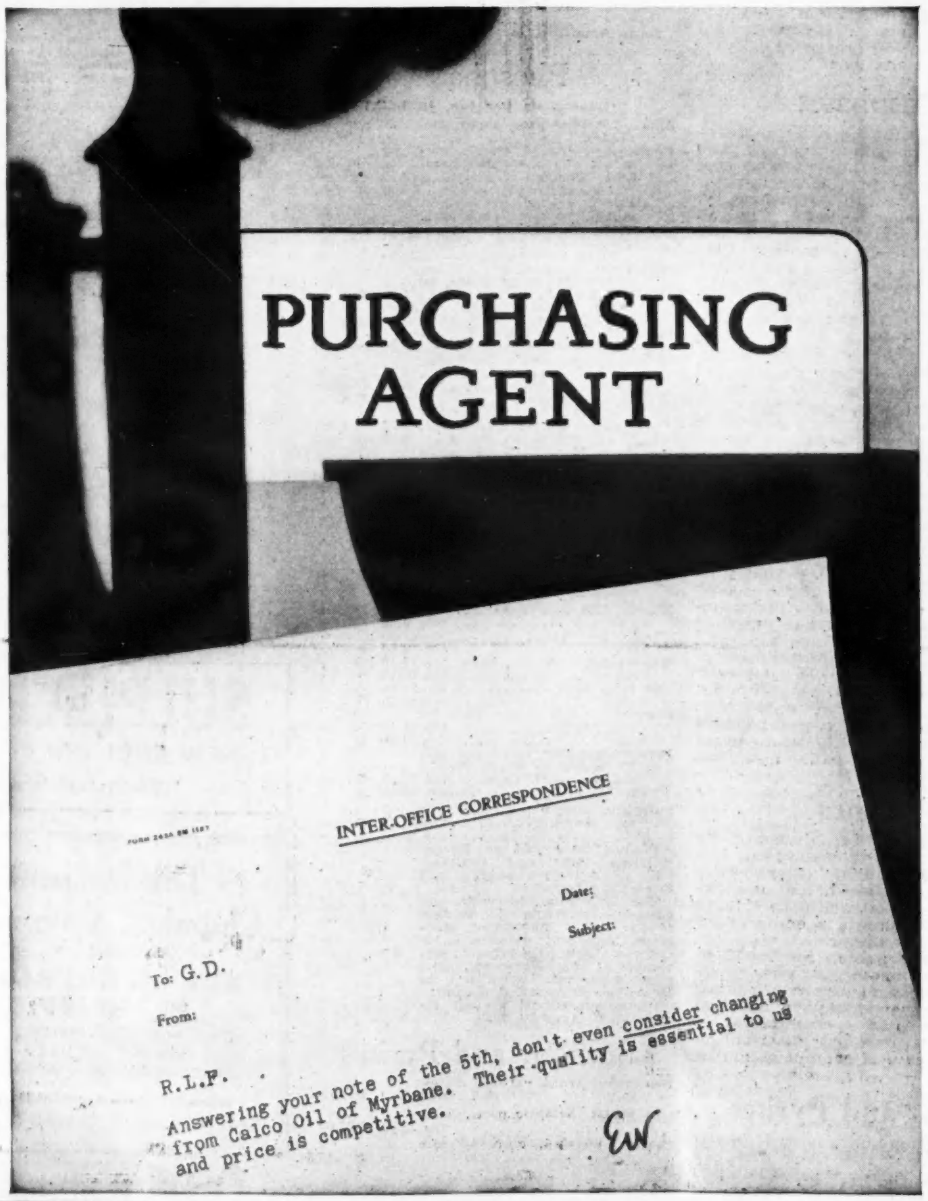
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INTER-OFFICE CORRESPONDENCE
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R.L.F.
Answering your note of the 5th, don't even consider changing from Calco Oil of Myrbane. Their quality is essential to us and price is competitive.
EW

Coaltar Products

Improved Demand for Colors and Intermediates From Various Users—Motor Benzol Active —Crude Naphthalene Lower

The encouraging progress which was being made in highly diversified lines of industry was constructively regarded in leading circles where coaltar products are handled. The ending of the vacation period, and the more satisfactory reports emanating from some divisions of the textile industry made for a feeling of increased confidence in not a few quarters of the market. Actual price changes were few in numbers. In fact the price tendency in most products appeared to be upwards. This was especially true in the case of benzol and toluol. The domestic demand had been supplemented by some substantial sized foreign orders in benzol. Moreover, the demand for motor benzol was reaching satisfactory totals for this season of the year. The output of toluol was under contract and the tone of the spot market consequently remained quite firm.

Trade in crude naphthalene assumed somewhat more liberal proportions, but prices were off about ⅛c. at 2¼c. per pound. The refined product was in more liberal supply. There was no great urge to buy creosote oil, cresylic acid, cresol, etc., as the bulk of the demand for disinfecting purposes had been provided for for the season. Most of the coaltar intermediates were meeting a fairly diversified demand. Phenol derivatives did not reflect the easier position of the raw material. Demand for anilin oil has shown a steady improvement ever since the recent price reduction.

Importations of coaltar acids in the first six months of this year reached a total of 1,840,522 pounds, whereas in the corresponding period of a year ago these importations only amounted to 49,480 pounds. The imports of all other coaltar intermediates in the first six months of this year amounted to 638,809 pounds as compared with 1,230,879 in the corresponding period a year ago.

Current prices on coaltar products, formerly printed on pages 10 and 12, are now printed at the end of this market report.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
None.	Naphthalene crude, ⅛c. per lb.

Comparative Values

Index numbers compiled from twenty typical coaltar products on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
125.0	125.0	125.0	128.5

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Basic Products

Benzene (Benzol).—No relaxation from the tight position which had ruled in this item over so many months came under review during the course of last week's trading. In fact, agents for the producers reported supplies were none too plentiful. Producers continued to hold the 90 percent and pure grades at 22c. per gallon tanks, works, and the nitration grades at 25c. in tanks, per gallon and 30c. in drums. The export outlet has proved an important one this year. Exports during the month of June reached a total of 2,718,267 gallons, contrasted with 2,174,180 gallons in the corresponding period of a year ago. In the first six months of this year these exports amounted to 11,325,728 gallons, whereas in the corresponding period of a year ago some 15,209,807 gallons were exported. There had been no interruption to the regular contract movement in motor benzol despite the fact that the Department of Health had recently removed restrictions on the sale of ethyl gasoline. In fact, motor benzol is in all the year round demand now, and this outlet constitutes one of the most important ones in the field. So far as the benzol production situation was concerned recovery operations were showing a gradual increase. Buyers of finished steel products were specifying well in advance it was reported so that a record third quarter steel production was generally looked forward to. With 183 active furnaces in operation during the month of August production of pig iron reached a total of 3,136,570 tons during that month showing substantial gains over the totals for June and July.

Creosote Oil.—The importations of dead or creosote oil in the first six months of this year totalled some 45,547,536 gallons in contrast with 49,091,376 gallons in the same time a year ago. There was an arrival of 7,147 tons from Holland. The British market was reported as somewhat easier for shipment at 7½d. per gallon f.o.b. in bulk and at 6½d. for the home trade ex works.

Cresol.—This product met a fair amount of buying on the basis of 14c. to 17c. per pound for the U.S.P. in drums.

Cresylic Acid.—A fairly good demand developed at the lower price range recently announced, including the 95 to 97 percent at 70c. to 72c. per gallon, and the 97 to 99 percent at 72c. to 75c. Recent imports included 20,000 pounds 51 casks, and 76 drums mostly from the United Kingdom.

Naphthalene.—Several sales of round lots of the crude embracing lots of 50 to 100 barrels were arranged during the course of last week's trading, this business being closed on the basis of 2¼c. per pound. There were arrivals of over 275,000 pounds from the United Kingdom markets. There was no longer a shortage of refined naphthalene and quick deliveries from the producers were again a possibility. In the British markets foreign flake and balls were being quoted at £16 5s. to £16 10s. per ton, in cases, ex-wharf.

Phenol.—Apart from a continuance of normal seasonal shipments which were being arranged at 13¼c. per pound, car lots, drums, works, for the U.S.P., the usual premium of 1c. per pound being quoted on goods f.o.b. this city. There was no new feature. For less than car lots the producers' quotations were on a basis of 13½c. per pound in 290-pound drums and 14c. for 250-pound drums, f.o.b. works, while f.o.b. this city 1c. per pound more was quoted. In minimum lots of five tons the 39 to 40 degree ice crystals for export were being quoted in the British markets at 6½d. per pound f.o.b. in drums. Crude was quoted at 2s. 2d. for naked at works.

Solvent Naphtha.—While sales of round lots were temporarily the exception, there had been a fairly good call for small lots which have been exchanging hands on the basis of 30c. per gallon, tanks, works and 35c. per gallon drums, works.

Tar Acid Oil.—It was difficult to locate any real change in the character of trading in this product. Dealers were holding the 15 percent at 26c. to 27c. per gallon in drums, and the 25 percent at 29c. to 30c. per gallon drums, works.

Toluene (Toluol).—The producers continued to adhere to their last price schedules of 35c. per gallon, tanks, works and 40c. per gallon drums, works, notwithstanding that a slight premium was being asked in some directions. Demand from the lacquer materials manufacturers who were beginning to experience large demands from the manufacturers of artificial leathers appeared to be the principal outlet.

Xylene (Xylol).—The demand continued rather slow during the course of last week's trading. Prices were steady, commercial grades being quoted at 30c. per gallon tanks, works, and 35c., drums, works. Exportations of crude coaltar distillates other than benzol in the first six months of this year totaled 19,973,296 gallons, as compared with but 8,146,334 gallons in the same time a year ago.

Chicago Coaltar Bases

CHICAGO, Sept. 6, 1928.

Products in the Chicago coaltar market continue to be in active demand, and for the most part have been taken in good quantities at prices fully firm. Solvent naphtha is an exception. Sellers have been unable to get full quoted prices on this product. Benzene is still

Valuable information on Imports and Exports of Coaltar Products is given in port lists beginning on page 5.

Coast to Coast Producing Points

Barrett Standard

TANK-WAGON DELIVERIES
of
COMMERCIAL 90% BENZOL
COMMERCIALLY PURE BENZOL
COMMERCIALLY PURE TOLUOL
SOLVENT NAPHTHA
COMMERCIAL XYLOL
in
NEWARK

Phone or communicate with
Mr. Jacobus, The Barrett Company, Newark, N. J.
Tel. Mitchell 8550

The Barrett Company
Ammonia-Benzol Department
40 Rector Street New York, N. Y.

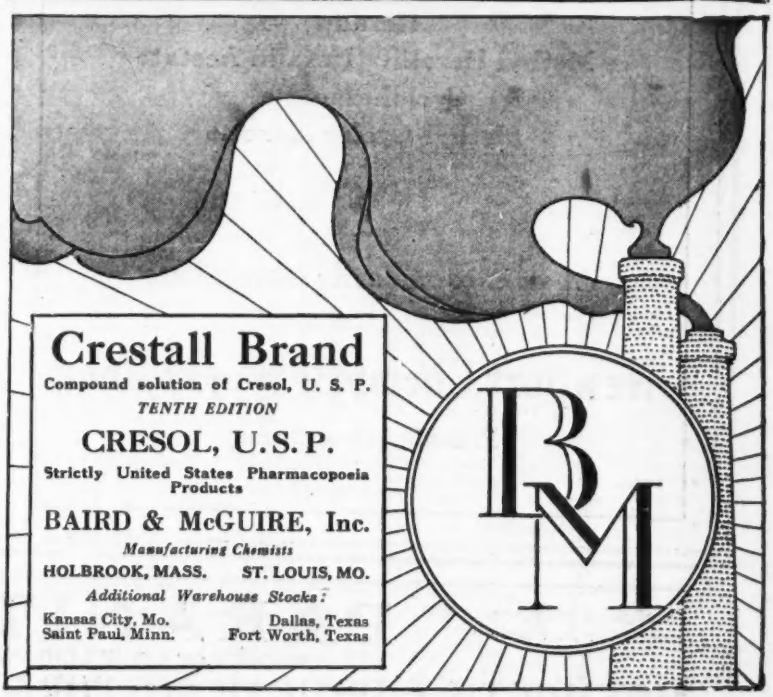
Coast to Coast Distributing Points

OIL OF MYRBANE
ANILINE OIL

Acetic Acid, Sulphuric Acid, Nitric Acid, Aqua Fortis, Muriatic Acid, etc., etc.

MANUFACTURED BY

The Naugatuck Chemical Company
NAUGATUCK CONNECTICUT



feeling a good motor fuel demand. Toluene and xylene are strong. Ruling prices (tankcar per gallon) are:—Benzene, 22c.; toluene, 36c.; xylene, 35c.; solvent naphtha, 30c.

Intermediates

Alphanaphthylamine. — The amount of business passing currently was well up to recent totals. Prices remained on a basis of 32c. to 34c. per pound in barrels.

Anilin Oil.—The market has been somewhat more active ever since the recent ½c. concession which established it at 14½c. per pound in tanks, and 15c. per pound for smaller quantities.

Anthraquinone. — The amount of business passing at 80c. to 90c. per pound for the 99.5 percent sublimed was reported to be showing an increase.

Benzaldehyde.—The technical grades have met a fair demand right along at the going quotations of 60c. to 65c. per pound in drums, while technical descriptions continued to sell $1.15 to $1.20 per pound for the IX in drums, and at $1.25 to $1.30 for the X. in drums.

Betanaphthol.—The technical grades continued to meet a fair amount of buying on the basis of 22c. per pound car lots, and 24c. for less than car lots, whereas the sublimed was maintained at 55c. to 60c. per pound in barrels.

Dimethylanilin. — Not much change from the recent character of trading showed itself in this item. Shipments against contracts were progressing on the basis of 27c. to 28c. per pound in drums as to quantity.

G Salt.—A moderate amount of trading continued to feature the market at the contract price of 50c. to 52c. per pound in barrels.

Michler's Keytone.—Fair withdrawals were the rule at the going quotations of $3 to $3.50 per pound in kegs.

Nitrobenzene. — Somewhat larger quantities were being taken by the manufacturers of intermediates. Quotations rested at 9½c. to 10c. per pound in drums.

Orthochlorphenol.—Steady conditions ruled in this division. The price range extended from 50c. per pound in drums upwards to 65c. for smaller quantities.

Orthonitrophenol.—The recent lowering of the basis of phenol had no influence on quotations for this intermediate.

Paranitroanilin.—This item has been giving a lively account of itself throughout the summer months. It was being firmly maintained by the producers at 52c. to 53c. per pound in kegs.

Paraphenylenediamine. — Contract business was progressing on the basis of $1.15 to $1.20 per pound in barrels.

Phthalic Anhydride.—The producers had sold their output ahead to a very substantial extent and the result was the continuance of firm conditions. Contract prices of 20c. to 21c. per pound for the refined in barrels and 18c. for the technical grades had not changed.

Resorcinol.—This item was established at $1.25 to $1.30 per pound in cans.

Tolidin.—The base was quoted at 86c. to 90c. per pound in kegs, while the distilled was held at 91c. to 95c. per pound.

Coaltar Acids

Anthranilic.—There appeared to be a little more activity last week. At least contract withdrawals had shown some increase.

Benzoic. — Producers were securing fair withdrawals at 57c. to 58c. per pound for the technical in kegs and 60c. to 61c. for the U.S.P. in kegs.

Cleve's.—The tone continued steady last week. Producers adhered to last prices of 52c. to 54c. per pound in barrels.

H.—The quotation remained at 68c. to 72c. per pound in barrels. Fair contract withdrawals were noted.

Monosulphonic.—Quotations stood at $1.65 to $1.70 per pound in barrels. Trade was fair.

Neville and Winther's.—This item was held at 85c. to 87c. per pound in barrels.

Picric.—The volume of contract deliveries appeared to be holding up to recent averages. The quotation in car lots stood at 30c. per pound in barrels, while for less than car lot quantities the going quotations ranged from 40c. to $1 per pound.

Tobias.—It was a steady market with not much to report in the way of new features. The makers quoted 85c. per pound in barrels.

Coaltar Colors

While the textile trades in general have been slower to reflect the seasonal improvement which has been common to other lines of industry the fact is that a good deal of anticipatory buying has been in progress and this has strengthened the market to some extent. Those consuming plants which had been more or less idle during the summer months are expected to resume operations along liberal lines in the next few weeks which should improve the general outlet for the dyes. The exports of colors, dyes and stains in the first six months of this year reached a total of 11,545,504 pounds, as contrasted with 12,534,036 pounds in the corresponding period of last year. The importations of coaltar colors, dyes, stains, color acids, color bases, etc., in the first six months of this year amounted to 3,072,154 pounds. A year ago importations of the same products were 3,187,447 pounds.

Current Prices

(For late price changes, see page 2)

Basic Products

Benzene (benzol), 90 p.c., works, drums	gal.	.27 @	.28
tanks	gal	22 @	.23
nitration, works, drums	gal.	.30 @	—
tanks	gal.	.25 @	—
pure, works, drums	gal.	.27 @	.28
tanks	gal.	.22 @	—
Carbazole, barrels	lb.	.45 @	.50
Coaltar, barrels	bbl.	9.00 @	9.50
Creosote oil, grade I, works, tanks	gal.	.17 @	.18
II, works, tanks	gal.	.14 @	.15
III works, tanks	gal	14 @	15
Cresol, U.S.P., drums	lb.	.14 @	.17
Cresylic acid 95@97 p.c., dark drums	gal.	.70 @	.72
97@99 p.c., pale, drums	gal.	.72 @	.75
Dichlorobenzene, 95 p.c., drums	gal.	.26 @	.30
Naphthalene, ball, barrels	lb.	06 @	.07
crude, bags	lb.	.02¼@	.02¾
dyestuff bags	lb.	.04½@	.05
flake, barrels	lb.	.05 @	.06½
Orthocresol, drums	lb.	.18 @	.28
Phenol, U.S.P., works, car lots, 250-lb. drums	lb.	.13¼@	—
Pyridin, drums	gal.	1.35 @	1.50
Solvent naphtha, water white, works, drums	gal.	.35 @	—
tanks	gal.	.30 @	—
Tar Acid oil, 15 p.c., drums	gal.	.26 @	.27
25 p.c. drums	gal.	.29 @	.30
Toluene (toluol), pure, works, drums	gal.	.40 @	—
tanks	gal.	.35 @	—
Xylene (xylol), 5 deg., works, drums	gal.	.45 @	—
tanks	gal.	.40 @	—
10 deg., works, drums	gal.	.33 @	—
tanks	gal.	.33 @	—
commercial, works, drums	gal.	.33 @	—
tanks	gal.	.30 @	—
nitration, works, drums	gal.	.55 @	—
tanks	gal.	.50 @	—

Acids

Anthranilic, refined, barrels	lb.	.98 @	1.00
technical, barrels	lb.	.80 @	—
Benzoic, technical, kegs	lb.	.57 @	.58
U.S.P., kegs	lb.	.60 @	.61
Broenner's barrels	lb.	1.25 @	—
Chlorosulphonic, drums	lb.	.04½@	.05½
Cleve's, barrels	lb.	.52 @	.54
Gamma, barrels	lb.	.97 @	.99
H, barrels	lb.	.68 @	.72
Laurent's, barrels	lb.	.40 @	.42
Monosulphonic, barrels	lb.	1.65 @	1.70
Naphthionic, barrels	lb.	No stocks	
Neville and Winther's, barrels	lb.	.85 @	.87
Phenylcinchoninic, tins	lb.	4.70 @	5.00
Picramic, kegs	lb.	.65 @	.70
Picric, car lots, barrels	lb.	.30 @	—
less than car lots	lb.	.40 @	1.00
Salicylic, technical, barrels	lb.	.37 @	.42
U.S.P., barrels	lb.	.40 @	.45
Sulphanilic, barrels	lb.	.15 @	.16
Tobias, barrels	lb.	.85 @	—

Intermediates

Alphanaphthol, refined, bbls.	lb.	.80 @	.85
technical, barrels	lb.	.60 @	.65
Alphanaphthylamine, barrels	lb.	.32 @	.34
Anilin oil, drums	lb.	.15 @	.16
tanks	lb.	.14½@	.15
oil for red, drums	lb	.38 @	.40
salt, barrels	lb.	.24 @	.26
Anthraquinone, 99.5 p.c., sublimed, kegs	lb	.80 @	.90
Benzaldehyde technical, drums	lb.	.60 @	.65
U.S.P., IX drums	lb	1.15 @	1.20
U.S.P., X drums	lb	1.25 @	1.30
Benzidin, base, barrels	lb.	.67 @	.74
Benzoyl chloride drums	lb	1.00 @	1.05
Benzyl chloride, 95@97 p.c., refined, drums	lb	.30 @	.35
technical, drums	lb	.25 @	—
Betanapthol, sublimed, barrels.	lb.	.55 @	.60
technical, car lots	lb	.22 @	—
less car lots	lb	.24 @	—
Betanapthylamine, sublimed, kegs	lb	1.25	Nom.
technical, kegs	lb	.65 @	.68
Chlorobensene drums	lb	.08½@	.09½
Dianisidin, barrels	lb.	2.80 @	—
Diethylanilin, drums	lb	.55 @	.60
Diethylorthotoluidin, drums	lb	.64 @	.67
Dimethylanilin, drums	lb.	.27 @	.28
Dinitrobenzene, barrels	lb.	.15½@	.16½
Dinitrochlorobenzene, barrels	lb.	.13 @	.14
Dinitronaphthalene, kegs	lb.	.35 @	.38
Dinitrophenol, barrels	lb.	.30 @	.34
Dinitrotoluene, drums	lb.	.17 @	.18
Diphenylamine, barrels	lb.	.42 @	—
Ethylidin anilin, drums	lb.	.60 @	.65
Ethylbenzylanilin, drums	lb.	.97 @	1.00
G salt, barrels	lb.	.50 @	.52
Hexalin, drums	lb.	.68 @	—
Metanitroanilin, kegs	lb.	.72 @	.75
Metanitroparatoluidin, barrels	lb.	1.70 @	1.80
Metaphenylenediamine, kegs	lb.	.84 @	—
Metatoluylenediamine, kegs	lb.	.70 @	—
Methylanthraquinone, kegs	lb.	.85 @	.95
Michler's ketone, kegs	lb.	3.00 @	3.50
Mixed toluidin, drums	lb.	.30 @	—

(Continued on page 59)

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Intermediates

(*Continued from page 58*)

Monochlorbenzene, drums	lb.	.10 @	.10½
Monoethylaniline, drums	lb.	1.06 @	1.08
Monoethyiorthotoluidin, drums	lb.	.70 @	.75
Monomethylparaminosulphate, drums	lb.	3.75 @	4.00
Nitrobenzene, drums	lb.	.09½@	.11
Nitronaphthalene, barrels	lb.	.25 @	—
Nitrotoluene, drums, works	lb.	.14 @	.15
Orthoaminophenol, barrels	lb.	2.15 @	2.25
Orthoanisidin, barrels	lb.	2.50 @	2.75
Orthochlorphenol, drums	lb.	.59 @	.65
Orthodichlorobenzene, drums	lb.	.08 @	.10
Orthonitrochlorobenzene, kegs	lb.	.30 @	.32
Orthonitroparachlorphenol, tins	lb.	.70 @	.75
Orthonitrophenol, kegs	lb.	.85 @	.90
Orthonitrotoluene, drums	lb.	.16 @	.18
Orthotoluenesulphonate, kegs	lb.	2.00 @	2.05
Orthotoluidin, drums	lb.	.25 @	.29
Para-aminoacetanilide, kegs	lb.	1.05 @	1.10
Para-aminophenol base, barrels	lb.	1.00 @	1.03
hydrochloride, barrels	lb.	1.25 @	1.30
Parachlorphenol, drums	lb.	.50 @	.65
Paradichlorobenzene, drums	lb.	.18 @	—
Paranitroacetanilide, kegs	lb.	.52 @	.54
Paranitroanilin, kegs	lb.	.52 @	.53
Paranitrochlorobenzene, kegs	lb.	.23 @	.24
Paranitrophenol, kegs	lb.	.55 @	.57
Paranitrotoluene, kegs	lb.	.29 @	.31
Paraphenylenediamine, barrels	lb.	1.15 @	1.20
Paratoluenesulphonamide, barrels	lb.	.70 @	.75
Paratoluidin, casks	lb.	.38 @	.42
Phthalic anhydride, refined, barrels	lb.	.20 @	.21
technical, barrels	lb.	.18 @	—
R salt, barrels	lb.	.44 @	.45
Resorcinol, technical, cans	lb.	1.25 @	1.30
Schaeffer's salt, kegs	lb.	.53 @	.57
Sodium metanilate, kegs	lb.	.70 @	.75
naphthionate, bottles	lb.	.55 @	.57
picramate, kegs	lb.	.69 @	.72
Tetralin, drums	lb.	.20 @	—
Thiocarbanilide, drums	lb.	.23 @	.24
Toluidin base, kegs	lb.	.88 @	.90
distilled	lb.	.91 @	.95
Xylidin, drums	lb.	.37 @	.39

Coaltar Colors

Color Index No.		Per pound.	
10	Naphthol yellow S	1.25 @	1.40
20	Chrysoidine Y	.50 @	.55
24	Sudan I	1.00 @	1.25
27	Orange G	.60 @	.75
31	Amido naphthol red G	.50 @	.55
36	Chrome yellow 2G	.65 @	.70
40	Chrome yellow R	.50 @	1.00
53	Victoria violet	.80 @	1.00
57	Amido naphthol red 6B	.35 @	.40
73	Sudan II	1.00 @	1.25
79	Ponceau 2R	.50 @	.60
83	Bordeaux B	.90 @	.95
138	Metanil yellow	.70 @	.80
151	Orange II	.25 @	.35
165	Lake red C	1.15 @	1.25
176	Fast red A	.65 @	.75
179	Azo rubine	1.00 @	1.05
180	Fast red VR	1.50 @	1.65
189	Lake red R, paste	.85 @	.90
189	Lake red R, powdered	3.00 @	3.10
202	Chrome blue black U	.45 @	.50
204	Chrome black A	1.75 @	2.00
208	Fast acid blue R	.75 @	2.00
216	Chrome red B	1.75 @	2.00
234	Resorcin brown B	.75 @	.80
235	Resorcin dark brown	.75 @	.80
246	Acid black 10B	.50 @	.70
252	Brilliant croceine	.90 @	1.00
258	Sudan IV	1.00 @	1.25
262	Cloth red 2B	.60 @	.80
289	Fast cyanine 5R	.90 @	1.00
299	Chrome black F	.45 @	.50
307	Fast cyanine black B	.80 @	.85
326	Direct fast scarlet	2.00 @	2.25
331	Bismarck brown	.40 @	.45
332	Bismarck brown 2R	.40 @	.45
364	Paper yellow	.50 @	.90
365	Chrysophenine G	.50 @	.68
382	Direct scarlet B	2.00 @	2.10
387	Direct violet B	1.00 @	1.30
394	Direct violet N	1.25 @	1.30
401	Developed black BHN	.80 @	1.00
406	Direct blue 2B	.25 @	.30
415	Direct orange R	.75 @	.90
419	Direct fast red F	.75 @	.85
420	Direct brown M	1.00 @	1.15
448	Benzo purpurine 4B	.35 @	.50
495	Benzo purpurine 10B	.50 @	.75
502	Direct azurine G	.75 @	.80
512	Direct blue RW	.80 @	1.00
518	Direct pure blue 6B	1.10 @	1.25
520	Direct pure blue	.25 @	3.00
539	Direct fast black FF	.75 @	1.00
581	Direct black EW	.25 @	.50
582	Direct black RX	.35 @	.45
593	Direct green B	.75 @	.90
594	Direct green G	1.00 @	1.65
596	Direct brown 3GO	.35 @	1.00
620	Direct yellow R	1.25 @	1.80
636	Fast light yellow 2G	3.00 @	3.25
666	Acid Green B	1.50 @	1.75
680	Methyl violet	2.00 @	2.25
696	Acid violet	1.00 @	3.00
793	Phosphine	1.50 @	1.55
812	Primuline	.80 @	.90
814	Direct fast yellow	2.00 @	2.25
865	Nigrosine (water soluble)	.50 @	.55
	Sulphur black	.20 @	.25
	Sulphur blue	.50 @	1.50
	Sulphur brown	.50 @	1.00
	Sulphur maroon	.80 @	1.25
	Sulphur olive	.25 @	.50
	Sulphur tan	.50 @	1.00
	Sulphur yellow	.75 @	2.00
1177	Indigo, 20 p.c. paste	.15 @	.18
	Benzo fast black L	1.00 @	2.00
	Zambesi blacks	.75 @	1.00

Construction of a new benzol plant by the Algoma Steel Company will commence shortly. This new plant will be part of the building program of the Lake Superior Corporation, involving expenditures of over $12,000,000. Included in this development will be the improvement of the Michipicoten Harbor and the erection of huge coal docks.

Imports of synthetic indigo at Shanghai in the first six months of 1928 were valued at 4,064,000 Haikwan taels, against 2,656,000 in the similar period of 1927. The United States had about 25 percent of the trade in each period.

A firm of exporters and washers of rubber in Para, Brazil, importing on its own account, has expressed a desire to the American consulate at Para to purchase chemical dyes to be used in the manufacture of rubber crepe. Samples of rubber crepe have been submitted, and properly accredited American firms who are interested in this opportunity may obtain the name of the inquirer by addressing the chemical division of the United States Bureau of Foreign and Domestic Commerce, Washington.

The Altos Hornos has acquired the tar distilling plants of Burt, Boulton & Haywood, Ltd., a British company, and the Sdad. Bilbaina de Maderas y Alquitranes, a French company, according to Consul H. A. Doolittle, Bilboa, Spain. In the case of these two plants, no purchase price was paid as the Altos Hornos is the only large producer of tar for these plants to distil. It is understood, however, that they are allowing the two plants to continue running for five years, furnishing them with regular supplies of tar at an agreed price. At the end of five years, Burt Boulton & Haywood and the Sdad, Bilbaina will cede the properties to the Altos Hornos for the production of benzol and anilin derivatives.

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Dyestuffs and Tanstuffs

Increased Activity in Gambier, Quebracho, Cutch And Valonia—Bichromate Shipments Improve —Starches and Dextrins Livelier

Trading in dyestuffs and tanstuffs was conducted along rather routine lines in the week following the Labor Day holidays. Consumers had not yet taken a decided position in the matter of anticipating future requirements, although it was noticeable last week that a number of special items were coming in for more attention. More activity was evident both in cutch and gambier and while quotations for both of these were shaded fractionally this was merely done for the purpose of stimulating activity. In the anticipation of larger offers of new crop valonia, prices for mixtures were shaded to the extent of $1 per ton. The beards were, however, in scant supply and prices were being quite firmly maintained.

Producers of quebracho extract reported that a good volume of shipments was being made against contracts outstanding. The 63 percent solid extract was quoted at basis of 5¼c. per pound in barrels, the 15 percent advalorem import duty being for buyers' account, while the clarified was quoted at 5⅝c. basis 64 percent, import duty also for buyers' account. Few changes appeared in any of the dye extracts but fustic hypernic, indigo logwood and quercitron were being moved into consumption in fairly normal quantities.

In line with the larger shipments which were beginning to be seen in some of the major chemical items, the bichromates were showing considerably more activity last week. The call for additional quantities was on the increase and this business was being consummated at the higher price levels recently named. A huge volume of business was put up to the manufacturers of corn starches and dextrin following the Labor Day holidays. These products had not changed further last week but the trade was keeping a close watch on the reactionary tone which had developed in the raw material on the prospect of a bumper crop. This, it was expected, might have a later influence on wholesale prices.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
None.	Cutch, Borneo ½c. per lb.
	Myrobalans J2, $1 per ton.
	Valonia mixtures, $1 per ton.

Comparative Values

Index numbers compiled from nineteen typical dyestuffs and tanstuffs on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
157.8	158.2	158.1	166.8

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Chemicals

Aluminum Chloride.—The producers pointed to a continuance of fair contract shipments on the basis of 3c. to 3¼c. per pound for the 33 to 35 percent. The metal was held at 24.30c. per pound.

Antimony Salt.—Shipments to the textile and allied trades were showing a fair amount of increase. The quotation remained at 25½c. to 26c. per pound for the 66 percent. The importations of antimony in the first six months of this year reached a total of 1,260,826 pounds net antimony content, compared with 2,650,789 pounds in the corresponding period of a year ago.

Potash Bichromate.—Buyers continued to take substantial sized quantities at full contract prices. The market ruled steady on the basis of 8¾c. per pound in casks, and at 9c. per pound for smaller quantities.

Soda Bichromate.—The majority of consumers were covered on contract specifications, but these were in some instances maturing and resulting in the placing of additional business on the basis of 7c. per pound in casks, and 7¼c. per pound for smaller quantities. The exports during the month of June amounted to 815,612 pounds as compared with 648,670 pounds in June, 1927, whereas exports for six months ending with June last were 4,779,156 pounds, compared with 4,951,945 pounds in the same time a year ago.

Turkey Red Oil.—There was little or no departure from the recent character of trading in this division. Dealers were quoting the 50 percent at 9c. to 11c. per pound in drums or barrels and the 75 percent at 12c. to 14c. per pound either in drums or barrels.

Dyestuffs

Annatto.—A moderate amount of trade characterized this product. Dealers were holding for 34c. to 37c. per pound for the paste in boxes and 7¼c. to 7½c. per pound for the steel in boxes.

Archil.—Small jobbing quantities continued to move into consumption. The general tone of the market was reported as being quite firm.

Camwood.—Following the Labor Day holiday the inquiry seemed to be a little more brisk. Prices were maintained 18c. per pound for the ground bark in barrels.

Cochineal.—As a result of the higher prices being quoted from the Canary Islands the silver grade was being held in some quarters of the trade for a minimum of 95c. per pound. The black kinds appeared to be entirely used up and the position was nominal. One seller had not yet changed his ideas of the Teneriffe silver grade to conform to the higher levels ruling so that a price range of 86c. to 95c. per pound applied on this. The manufacturers of carmine were reported as rather active buyers of the product.

Fustic.—Since fustic sticks were being received with regularity on contract at the old shipment quotation of $25 to $26 per ton, producers of the extract had not changed their price views of 7c. to 9c. per pound for the 42 degrees liquid extract and 8c. to 10c. for the 51 degrees extract. The regular crystal extract was quoted at 18c. to 22c. per pound in barrels, and the solid at 14c. to 16c. per pound in drums.

Hypernic.—The raw material was being received from Brazil in about normal quantities for this season of the year which did not occasion any departure from the scheduled list prices of 17c. to 20c. per pound drums for solid, while the 51 degrees liquid extract was being quoted at 11c. to 15c. per pound in barrels.

Indigo.—The regular contract movement in the synthetic on the basis of 12c. per pound was well up to recent totals. No recent reports had been received as to the status of the Madras grade.

Logwood.—The exportations of logwood extracts dropped off somewhat in the first six months of this year when the total was but 1,066,998 pounds, contrasted with 1,364,937 pounds in the same time a year ago. Most sections of the textile trade were under contract and were taking substantial quantities of the extract.

Madder, Dutch.—Quotations remained at 22c. to 25c. per pound in bags. A fair demand appeared to be running.

Osage Orange.—A fair miscellaneous inquiry was evident last week. The producers continued to name 6¾c. to 7¼c. per pound for the 51 degrees in barrels.

Quercitron.—The usual amount of contract buying showed itself during the course of last week's trading. The market was firmly maintained at 5½c. to 6c. per pound for the 51 degrees liquid, while the solid was quoted at 9½c. to 10c. per pound in drums.

Sizing Materials

Albumen.—Operations among confectionery manufacturers were still being conducted along rather restricted lines and the consequence was a rather light demand for albumen. There was a big falling off in importations of this product during the month of June,

Current prices on dyestuffs and tanstuffs, formerly printed on page 12, are now printed at the end of this market report.

Valuable information on Imports and Exports of Dyestuffs and Tanstuffs is given in port lists beginning on page 5.

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Jersey City, N. J.

when the total only reached 162,230 pounds, while the total imports were but 861,396 pounds compared with 1,460,879 pounds in the same time a year ago.

Dextrin.—The grain markets had lost a substantial part of the gains scored in the week before on estimates that the corn drop might out-turn as much as 3,069,000,000 bushels which was about 39,000,000 bushels more than the government's August estimate. Until the temporary shortage in spot corn has been overcome it seemed doubtful that the refined product would sympathize with the action of corn futures. Big activity featured the market following the three day suspension of activities over the Labor Day holiday. A rather substantial increase was shown in the importations of British gum during June, when the total reached 797,028 pounds. For the six months ending June last the imports were 12,037,467 pounds, compared with 12,021,325 pounds in the same time in 1927.

Egg Yolk.—A fairly good volume of orders appeared for egg yolk following the three-day holiday suspension. The granular was being taken readily on the basis of 68c. to 70c. per pound in cases whereas fair inquiries also appeared for the spray at 76c. to 78c. per pound in cases. Imports of dried egg albumen in the first six months of this year reached a total of 861,396 pounds, compared with 1,460,879 pounds in the corresponding period of a year ago.

Corn Starches. — Exportations of corn starches in the first six months of this year reached the formidable total of 131,557,069 pounds as contrasted with 98,506,358 pounds in the corresponding period of a year ago. The corn futures market had turned reactionary on prospects of a bumper crop and sentiment in market circles was less bullish than it had been a week ago. The importations of other starches had fallen off to 2,207,557 pounds, which compared with 6,391,508 pounds in the same time a year ago. Potato starches came in in rather large volume from Norway, Holland, and Denmark last week and there were also fairly liberal arrivals of rice starches.

Tapioca Flour.—Importations of farinaceous substances including tapioca in the first six months of this year totalled about 85,000,000 pounds in contrast with 46,500,000 pounds in the corresponding period of a year ago. Dealers were adhering firmly to last prices and quoting a range of 3¼c. to 5½c. per pound in bags.

Tanning Materials

Chestnut.—Exports of chestnut extract in the six months ending June totalled 103,362 pounds compared with 92,243 pounds in the same time a year ago. A seasonal contract movement continued to feature the market.

Cutch.—Firm conditions were operative, although the market had not yet gotten away from its holiday lethargy. Such business as was passing was done at last prices, including 14c. to 16c. per pound for the Rangoon grades in boxes and 7½c. to 8c. per pound for the Borneo grade in bales. The higher prices for the Rangoon were in reflection of the advances which had been scored in the British markets. The Borneo grades were not in plentiful supply.

Divi-Divi.—Shipment prices for the bark remained substantially unchanged on the basis of $57 to $58 per ton for shipment in bags. Producers of the extract were showing a nominal interest, but they did not appear to be ready to commit themselves extensively as yet.

Gambier. — Although additional change was lacking in the market for gambier last week, the tendency towards the lower prices had not entirely disappeared. A glance at the import statistics for the first half of 1928 showed that 168,480 pounds arrived here during this period, as contrasted with 146,756 pounds in the corresponding period of a year ago.

Mangrove.—In the absence of new cables from the primary sources of supply the tone of this item continued relatively firm. The J1 was quoted at $45 per ton for shipment and the J2 at $35.50 to $36 per ton for shipment. There was no change in the powdered or liquid extract.

Myrobalans.—The arrivals during June had been extremely small, amounting to only about 798 tons, but during the first six months of the year receipts had totalled 11,118 tons contrasted with 11,110 tons in the corresponding period of a year ago. A fair amount of business appeared to be passing at $34 to $35 per ton for the J2 shipment and at $45 per ton for the J1 for shipment.

Nutgalls.—Inquiry for the Chinese varieties, which have been selling on the basis of 13c. to 14c. per pound for shipment was reported somewhat more active. The Aleppo grades were being maintained at 20c. to 22c. per pound in bags.

Quebracho. — While the contract movement was continuing to reach fairly large totals over 1,000,000 bags arriving in this city and 7,322 bags at Norfolk last week, the fact was that total receipts for the first six months of the year were about 12,500,000 pounds behind those of the same time last year at 51,327,192 pounds.

Sumac.—The gradual strengthening of the market to a point where Sicilian shippers were asking $60 to $65 per ton for shipment in bags had been actuated by a somewhat better inquiry from the tanners, who were expected to take hold in a more comprehensive manner now that the fall season is on. Imports for the first six months of this year at 2,232 tons only showed a slight increase over the totals of a year ago.

Valonia.—The June importations only amounted to about 110,230 pounds as compared with 818,735 pounds in the corresponding period of a year ago. For the first six months of the year total imports amounted to 7,681,749 pounds in contrast with 7,581,543 pounds in the same time a year ago. Holders had recently shaded their quotations for the mixtures to $55 to $56 per ton, whereas the 40 percent beards were being maintained at $68 per ton for shipment.

Wattle Bark.—Trade continued to reach fair totals at the going quotations of $58 to $60 per ton in bags.

Current Prices

(For late price changes, see page 2)

Chemicals

Aluminum chloride, 33@35 p.c., works, drums	lb.	.03 @	.03¼
Antimony salt, 66 p.c., tins	lb.	.25½@	.26
Iron nitrate, commercial (see Industrial chemicals).			
Potash bichromate, casks	lb.	.08¾@	.09
prussiate (see Industrial Chemicals).			
Soda bichromate, casks	lb.	.07 @	.07¼
hydrosulphite, barrels	lb.	.23 @	.25
hyposulphite, crystals, barrels,	100 lbs.	2.40 @	2.75
pea, barrels	100 lbs.	2.50 @	3.00
granular, barrels	100 lbs.	2.75 @	3.25
phosphate, commercial (see Industrial Chemicals).			
prussiate (see Industrial Chemicals).			
Tin crystals (see Industrial Chemicals).			
Turkey red oil, 50 p.c., barrels or drums	lb.	.09 @	.11
75 p.c., barrels or drums	lb.	.12 @	.14
Zinc dust (see Industrial Chemicals).			

Dyestuffs

Annatto paste, boxes	lb.	.34 @	.37
seed, boxes	lb.	.07¼@	.07½
Archil extract, concentrated, barrels	lb.	.17 @	.19
double, barrels	lb.	.12 @	.14
Barwood (see red sanders wood).			
Brazil-wood extract (see hypernic).			
sticks, shipment	ton.	26.00	@28.00
Camwood bark, ground, barrels.	lb.	.18 @	—
Cochineal gray, bags	lb.	.95 @	—
black	lb.	None.	
Teneriffe silver, bags	lb.	.86 @	.95
Cudbear, powdered, boxes	lb.	.17 @	.28
Fustic, extract, crystals, barrels, regular	lb.	.18 @	.22
liquid, 51 deg., barrels	lb.	.08 @	.10
42 deg., barrels	lb.	.07 @	.09
solid, drums	lb.	.14 @	.16
sticks, shipment	ton.	25.00	@26.00
Hematine, crystals, barrels	lb.	.14 @	.18
Hypernic, solid, drums	lb.	.17 @	.20
liquid, 51 deg., barrels	lb.	.11 @	.15
Indigo, Madras, barrels	lb.	1.26 @	1.29
synthetic, liquid, barrels	lb.	.12 @	—
Logwood extract, crystals, barrels	lb.	.14 @	.18
liquid, 51 deg., barrels	lb.	.07 @	.08¼
solid, boxes	lb.	.12 @	.14
sticks, Haitian, shipment	ton.	24.00	@25.00
Madder, Dutch, bags	lb.	.22 @	.25
Osage orange extract, liquid, 51 deg., barrels	lb.	.06¾@	.07¼
Persian berry extract, barrels	lb.	.25	Nom.
Quercitron extract, liquid, 51 deg., barrels	lb.	.05¼@	.06
solid, drums	lb.	.09½@	.10
Red sanders wood, ground, barrels	lb.	.18 @	—
Turmeric (see Botanical Drugs).			

Sizing Materials

Albumen, blood, barrels	lb.	.43 @	.48
egg, edible, cases	lb.	.80 @	.85
Dextrin, British gum, bags	100 lbs.	5.02 @	5.25
corn, bags	100 lbs.	4.77 @	4.97
potato, imported, bags	lb.	.08 @	.09
Egg yolk, granular, cases	lb.	.68 @	.70
spray, cases	lb.	.76 @	.78
Sago flour, bags	lb.	.04¼@	.05½
Starch, corn, pearl, bags	100 lbs.	3.97 @	4.17
powdered, bags	100 lbs.	4.07 @	4.27
potato, domestic, bags	lb.	.05¾@	.06¼
imported, bags	lb.	.06 @	.06½
rice, barrels	lb.	.09 @	.10
wheat, bags	lb.	.06¼@	.10¼
Tapioca flour, bags	lb.	.03¼@	.05½

Tanning Materials

Chestnut extract, clarified, 25 p.c., tannin, barrels	lb.	.02 @	.02¼
tanks	lb.	.01¼@	.01¾
Cutch, Borneo, bales	lb.	.07½@	.08½
Rangoon, boxes	lb.	.14 @	.16
Divi-divi, shipment, bags	ton.	58.00 @	—
extract, 25 percent tannin, barrels	lb.	.05 @	.05½
Gall extract, barrels	lb.	.18 @	.20
Gambier, common, bags	lb.	.05¼@	.06
extract, 25 percent tannin, barrels	lb.	.08 @	.10
plantation, bags	lb.	.07¾@	.07¾
Singapore, cubes, bags	lb.	.08½@	.09
Hemlock extract, 25 p.c. tannin, barrels	lb.	.03¾@	.04¼
Mangrove bark, African, shipment	ton.	37.00	@38.00
Myrobalans, J1, shipment, bags,	ton.	45.00 @	—
J 2, shipment, bags	ton.	34.00	@35.00
extract, liquid, 25 p.c., barrels,	lb.	.03¾@	.04¼
powdered, 53 p.c., barrels	lb.	.05 @	.05½
Nutgalls, Aleppo, bags	lb.	.20 @	.22
Chinese, shipment, cases	lb.	.13 @	.14
Oak bark extract, 25 p.c. tannin, barrels	lb.	.04 @	.04½
Quebracho extract, solid, 68 p.c. tannin, barrels	lb.	.03¼@	.03¾
clarified, 64 p.c.		.05⅝@	—
liquid, 35 p.c., barrels	lb.	.03¼@	.03½
Spruce extract, 25 p.c. tannin, barrels	lb.	.01½@	.02
powdered, barrels	lb.	.02½@	.03
Sumac, domestic, f.o.b. South, bags	ton.	35.00 @	—
extract, 42 deg., barrels	lb.	.05½@	.06½
Sicilian, ground, shipments, bags	ton.	60.00	@65.00
extract, stainless, barrels	lb.	.10 @	.11
Valonia beards, 40 p.c., shipment, bags	ton.	68.00	@70.00
cups, shipment, bags	ton.	No stocks	
mixtures, shipments, bags	ton.	54.00 @	—
Wattle bark, shipment, bags	ton.	58.00	@60.00

Dye Standards Supplement Issued

The United States Treasury Department has issued supplementary list No. 36 of proposed standards of strength of imported coaltar dyes:—

Std. No.	Class index.	Name of standard.	Mfr.	Partial list of trade names of imported products commercially identical with each standard.	Mfr.
1 BC	(A)	Alizarine night blue AG	(S)	Alizarine night blue AG conc.	(S)
2 BC	(DR)	Artificial silk black GN	(J)	Artitificial silk black G N conc.	(J)
3 BC	(DAS)	Artisil direct blue 2R 20% paste.	(S)	Setacyl direct blue BS BS conc.	(G)
4 BC	(D)	Chloramine light brown R	(S)	Chloramine light brown R conc.	(S)
5 BC	(V)	Ciba brown G 20% paste	(J)	Ciba brown G pastes and powd.	(J)
				Vat brown RRD pastes and powder	(IG)
6 BC	(A)	Cloth fast violet R	(J)	Cloth fast violet R conc.	(J)
7 BC	(D.d)	Diazo fast yellow 3GL	(J)	Diazo light yellow 3GL	(J)
8 BC	(V)	Hydron violet BBF high conc. 18% paste	(IG)	Hydron violet BBF pastes and powder	(IG)
				Algole violet BBN pastes and powder	(IG)
9 BC	(V)	Indanthrene golden yellow GK 25% paste	(IG)	Indanthrene golden yellow GK pastes and powder	(IG)
				Vat golden (gold) yellow GK pastes and powder	(IG)
10 BC	(V)	Indanthrene navy blue R 20% paste	(IG)	Indanthrene navy blue R pastes and powder	(IG)
				Vat navy blue R pastes and powder	(IG)
11 BC	(A)	Kiton fast green A	(J)	Kiton fast green A conc.	(J)
12 BC	(A)	Neolan blue 2 R	(J)	Neolan blue R B	(J)
13 BC	(D.d)	Rosanthrene R	(J)	Rosanthrene R conc	(J)
14 BC	(Sr.)	Thional brilliant green 2 B	(S)	Thional brilliant green 2 B conc.	(S)

Additional Names of Dyes Corresponding to Dyes Already Adopted as Standards

19	(A)	Acid rhodamine R	(B)	Acid rhodamine R	(var)
41	S. 847 C. 1116	Algol green B 12½% paste	(By)	Vat green BB pastes and powd.	(IG)
47	S. 828 C. 1115	Algol red B 12½% paste	(By)	Algole red BTK pastes and powd.	(IG)
72	C. 1032	Alizarine claret R 20% paste	(By)	Alizarine claret RL pastes and powder	(IG)
93	C. 1200	Alizarine indigo 5 R 20% paste	(By)	Algole blue 5 R pastes and powd.	(IG)
111	S. 858 C. 1053	Alizarine saphirol SE	(By)	Lanasol blue S E	(J)
133	(V)	Anthra scarlet G 16⅔% paste	(B)	Algole scarlet GGN pastes and powder	(IG)
137	S. 801 C. 1060	Anthracene blue SWGG	(B)	Anthracene blue SWGGH	(IG)
148	S. 759 C. 1095	Anthra flavone GC 12½% paste	(B)	Algole yellow GC pastes and powder	(IG)
196	S. 297 C. 353	Benzo fast pink 2 BL	(By)	Rose direct lumiere 2BL	(P)
198	C. 278	Benzo fast red 8 BL	(By)	Rouge direct lumiere 8 B	(P)
200	C. 278	Benzo fast rubine BL	(By)	Direct fast rubine B L	(IG)
211	(D)	Benzo rhoduline red B	(By)	Direct pink EG supra 1161	(G)
223	S. 503 C. 667	Brilliant acid green 6B	(By)	Milling green B high conc.	(Var)
257	(D)	Brilliant pure yellow 6G extra	(By)	Brilliant pure yellow G ex.	(IG)
262	S. 182 C. 32	Brilliant sulphon red 5 B	(S)	Polar brilliant red 3B conc.	(G)
297	S. 613 C. 801	Chinoline yellow	(B)	Quinoline yellow KT extra conc.	(IG)
				Chinoline yellow SS conc.	(S)
522	(D.a)	Diphenyl brown ND	(G)	Diphenyl brown BBN 132	(G)
562	S. 553 C. 722	Erio chrome cyanine R	(G)	Erio chrome cyanine RCD1067	(G)
594	S. 19 C. 636	Fast light yellow 2 GN	(By)	Fast light yellow E 2 G	(IG)
597	S. 164 C. 180	Fast red V R	(By)	Chromotrope F 4 B	(Var)
628	(L)	Hansa yellow G 15% paste	(M)	Stone fast yellow trans. pastes, powder and lumps	(IG)
				Stone fast yellow G trans. pastes, powder and lumps	(IG)
				Stone fast yellow GA trans. pastes, powder and lumps	(IG)
				Stone fast yellow GGR extra trans. pastes, powd. & lumps.	(IG)
				Stone fast yellow GSA trans. pastes, andwer and lumps	(IG)
651	S. 913 C. 1217	Helindone orange R 10% paste	(M)	Algole orange RF pastes and powder	(IG)
652	S. 910 C. 1211	Helindone pink AN 10% paste	(M)	Algole pink B G pastes and powder	(IG)
653	S. 910 C. 1211	Helindone pink BN 10% paste	(M)	Algole pink B pastes and powd.	(IG)
655	S. 917 C. 1209	Helindone red B 20% paste	(M)	Algole rubine B pastes & powd.	(IG)
657	S. 920 C. 1219	Helindone violet B 20% paste	(M)	Anthra violet B pastes & powd.	(IG)
659	S. 920 C. 1219	Helindone violet R 20% paste	(M)	Algole violet R R pastes & powd.	(IG)
674	(V)	Hydron Bordeaux R 6¼% paste	(C)	Algole bordeaux B pastes and powder	(IG)
678	(V)	Hydron olive GN 16⅔% paste	(C)	Vat olive G N pastes and powd.	(IG)
682	(V)	Hydron scarlet 3 B 16⅔% paste	(C)	Algole scarlet 3 B pastes and powder	(IG)
715	(V)	Indanthrene brown B 22% paste	(B)	Algole brown B T pastes and powder	(IG)
719	S. 827 C. 1143 ext.	Indanthrene claret B extra 12½% paste	(B)	Algole bordeaux R T pastes and powder	(IG)
723	S. 760 C. 1096	Indanthrene golden orange G 12½% paste	(B)	Cibanone golden orange GK pastes and powder	(J)
832	S. 564 C. 735	Naphtalene green V	(M)	Acid green V	(IG)
941	(Sr.)	Pyrogene pure blue 3GL	(J)	Pyrogene pure blue 3 G	(J)
992	S. 539 C. 707	Soluble blue T	(B)	Ink blue B J N	(IG)
994	(B)	Straw blue G	(By)	Special blue G	(IG)
1030	(V)	Thioindigo black B 20% paste	(K)	Vat printing black B pastes and powder	(IG)
1031	S. 912 C. 1207	Thioindigo red B 20% paste	(K)	Algole red 5 B pastes and powder	(IG)
1039	C. 925	Toluidine blue T N	(B)	Tannastrol T O conc.	(S)
1078	(A)	Xylene brilliant blue FFR	(S)	Xylene milling blue FFRX, FFRX conc.	(S)
1081	S. 22 C. 639	Xylene light yellow 2G	(S)	Kiton fast yellow 3 G N	(J)

Changes in Standard List

Helindone blue 3 R 20% paste (M), Standard 640, is changed to Helindone blue 3 R 28½% paste (M).

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Eighty-ninth Recapitulative Instalment

(Parenthetical references are to the numbers of patents in the United States or other countries, as designated)

2-Amino-5-Hydroxynaphthalene-7-sulphonic Acid

(Acide de Beta-amino-5-hydroxynaphthalene-7-sulfonique, 2-Amino-5-hydroxynaphtalin - 7 - sulfonsaeure, Beta - amino-5-hydroxynaphthalene - 7-sulphonic Acid)

Chemical

Starting point (B288159) in making intermediates used for making dyestuffs and pharmaceuticals with—
- 7-Chloro-2:4-dichloroquinazolin
- 2:4-Dichlorocopazolin
- 2:4-Dichloro(quinolin-1:3-diazin)
- 2:4-Dichloronaphtho-1:3-diazin
- 6:8-Dinitro-2:4-dichloroquinazolin
- 6-Nitro-2:4-dichloroquinazolin
- 6-Methyl-2:4-dichloroquinazolin

Dye

Starting point in making various synthetic colors

Benzoyl Chloride

(Benzoylchlorid, Chlorure de Benzoyle, Chlorure Benzoylique)

Chemical

Reagent in making—
- Benzoylecgonin
- Benzoylguaiacol (Benzosal)
- Benzoyl methylsalicylate (Benzosalin)
- Betaeucaine
- Hydroxybenzoylbenzenearsonic acids
- Intermediate chemicals from alcohols, phenols and amines, by the introduction of the benzoyl group
- Nastin
- Resist agents used in the dyeing of fabrics with substantive colors

Reagent (B264860) in making dispersive agents with—
- Betanaphtholallyl ether
- Betanaphtholamyl ether
- Betanaphtholbutyl ether
- Betanaphtholethyl ether
- Betanaphtholheptyl ether
- Betanaphtholisoallyl ether
- Betanaphtholisoamyl ether
- Betanaphtholisobutyl ether
- Betanaphtholisopropyl ether
- Betanaphtholmethyl ether
- Betanaphtholpentyl ether
- Betanaphtholpropyl ether

Starting point in making—
- Acetophenone
- Benzoic acid
- Benzoic anhydride
- Benzyl superoxide
- Methyl benzoate

Dye

Reagent in making—
- Algol brilliant orange FR
- Algol brilliant violet 2B
- Algol corinth R
- Algol pink R
- Algol red 5G
- Algol red R
- Algol scarlet G
- Algol violet WG
- Algol yellow R
- Algol yellow WG
- Anthraquinone dyestuffs with alphamethylbenzanthrone or betachlorobenzanthrone
- Ciba yellow 3G
- Condensation products with indigo
- Indigo yellow 3G
- Soluble vat colors from dimethyldibenzanthrone and dimethoxydibenzanthrone (B277398)
- Tetrabenzoylperylene

Dibutyl Tartrate

(Butyl Tartrate, Butyltartrat, Tartrate de Butyle, Tartrate Dibutylique, Weinsaeurebutylester, Weinsaeuredibutylester, Weinsaeuresdibutyl)

Paint and Varnish

Solvent and plasticizer in making—
- Paints, varnishes, and lacquers containing nitrocellulose and other cellulose derivatives

Plastics

Plasticizer in making—
- Compositions from nitrocellulose and other cellulose derivatives

Diethylanilin

(Diæthylanilin, Diethyleaniline)

Chemical

Starting point in making—
- 4-Arylaminoarylene - 2:1- thiazonium compounds, with the aid of 6-methyl -4-chloro - 2:1 - phenylenethiazonium chloride (B265545)
- Diethylglycocollguaiacol hydrochloride (Guaiasanol)
- Formamide derivatives, with the aid of carbon monoxide (B269303)
- Vulcanization accelerators, with citral and crotonoaldehyde (B249113)

Dye

Starting point in making—
- Acid violet 6B
- Acidol blue G
- Amethyst violet
- Betadiethylsafranin
- Brilliant green
- Crystal blue
- Cyanine B
- Ethyl green
- Ethyl purple
- Ethyl violet
- Formyl violet 5BN
- Formyl violet S4B
- Guinea violet
- Patent blue V
- Tetraethylsafranin
- Xylene blue VS

Isobutylsulphuric Acid Chloride

(Chlorure d'Acide Isobutylesulphurique, Isobutylschwefelsaeureschlorid)

Dye

Starting point (B271533) in making soluble vat dyestuffs with—
- Anthraquinone-1:2
- Flavanthrone
- Indanthrone
- Naphthacridone
- Thioindigo

Manganic Benzoylacetone

(Benzoyleacetone de Manganese, Manganibenzoylaceton)

Chemical

Starting point (B289493) in making—
- Intermediates used in the manufacture of synthetic perfumes, dyestuffs, and pharmaceuticals

Dye

Reagent (B289493) in making various synthetic colors

Petroleum

Antidetonant (B289493) in making—
- Special motor fuels

Picric Acid

(Acide Picrique, Acide Picronitrique, Picronitric Acid, Pikinsaeure, Pikrosalpetersaeure, Trinitrophenol)

Analysis

Reagent in various processes

Chemical

Reagent in making—
- Coumarone

Starting point in making—
- Ammonium picrate
- Barium picrate
- Calcium picrate
- Chloranil
- Ethylanthracene
- Isoamylanthracene
- Isopurpuric acid
- Magnesium picrate
- Potassum picrate
- Picramic acid
- Picryl chloride
- Picramid
- Sodium picrate
- Strontium picrate
- 2:4:6-Triammophenol
- 2:4:6-Trinitranilin

Dye

Starting point in making—
- Cross dye black RX
- Indulin dyestuffs, blacks and browns
- Nigrosin dyestuffs, blacks and browns
- Substantive cotton colors, blacks and browns

Explosives

Explosives for—
- Agricultural purposes
- General blasting

Ingredient of—
- Detonating compositions
- Dynamites
- Gelatines
- Percussion cap explosive compositions

Starting point in making—
- Ammonium picrate explosive compositions
- Lead picrate explosive compositions

Leather

Reagent in—
- Tanning

Metallurgical

Reagent in—
- Etching metals

Military

Explosive, used either alone or in admixture with other explosives

Starting point in making—
- Poisonous gases, such as chloropicrin

Miscellaneous

Antiseptic for various purposes

Healing agent for treatment of burns

Pharmaceutical

In compounding and dispensing practice

Photographic

Filter in microphotography

Textile

Dyeing

Pigment for—
- Animal fibers in yarn or fabric form, to produce bright yellow shades
- Silk and wool, either alone or in admixture with other colors, such as benzaldehyde green, methyl violet, and indigo carmine

Printing

Pigment, used either alone or in admixture with other dyestuffs, such as benzaldehyde green, methyl violet, and indigo carmine

Methyl Acetate

(Acetate de Methyle, Acetate Methylique, Essigsaeuremethylester, Essigsaeuresmethyl, Methylazetat)

Chemical

Reagent in various operations

Solvent in various operations

Dye

Reagent in making various synthetic colors

Solvent in making various synthetic colors

Food

Ingredient of—
- Flavoring extracts

Leather

Solvent in making—
- Artificial leather

Miscellaneous

Solvent in making various products

Paint and Varnish

Solvent in making—
- Nitrocellulose and cellulose acetate lacquers

Perfumery

Ingredient of—
- Cosmetics
- Perfumes

Plastics

Ingredient of—
- Compositions containing cellulose acetate (B252999)

Solvent in making—
- Nitrocellulose and cellulose acetate compositions (used in place of acetone)

Monophenylguanylthiourea

(Monophenyleguanylesulfouree, Monophenyleguanylethiouree, Monophenylguanylsulfoharnstoff, Monophenylguanylsulphourea, Monophenylguanylthioharnstoff).

Chemical

Starting point (B286749) in making vulcanization accelerators with—
- Butyl mercaptan
- Ethyl mercaptan
- 2-Mercaptobenzimidazole
- Mercaptobenzothiazole
- Mercaptobenzoxazole
- 2-Mercaptoiminazole
- 2-Mercaptothiazolin
- Mercaptotolylthiazole
- Meta-aminothiophenol
- Naphthylthiazole
- Orthoaminothiophenol
- Para-aminothiophenol
- Thioamides
- Thioammelin
- Thioanilides
- Thiocresol
- Thioxyindole
- Thiophenol

Para-aminobenzeneazosalicylic Acid

(Acide Para-aminobenzeneazosalicyle, Acide de Para-aminobenzeneazosalicylique, Para-aminobenzolazosalicylsaeure)

Dye

Starting point (B289135) in making disazo dyestuffs with—
- 3-Bromosalicylic acid
- 5-Bromosalicylic acid
- 3-Chlorosalicylic acid
- 5-Chlorosalicylic acid
- 3:5-Dibromosalicylic acid
- 3:5-Dichlorosalicylic acid
- 3:5-Di-iodosalicylic acid
- 3:5-Dinitrosalicylic acid
- 3-Iodosalicylic acid
- 5-Iodosalicylic acid
- Metaresotinic acid
- 3-Nitrosalicylic acid
- 5-Nitrosalicylic acid
- Salicylic acid
- Xylenolcarboxylic acid

Propyl Mercaptan

(Mercaptane de Propyle, Mercaptane Propylique, Propylsulfhydrat, Propyl Sulphydrate, Sulfhydrate de Propyle, Sulfhydrate Propylique)

Chemical

Starting point in making—
- Intermediates
- Pharmaceutical chemicals

Starting point (B286749) in making rubber vulcanization accelerators with—
- Dibenzylamine
- Diethylguanylthioureas
- Diphenylbiguanide
- Ditolylbiguanide
- Ethanolamine
- Guanylureas
- Isothioureas
- Isoureas
- Monophenylbiguanide
- Monophenylguanylthiourea
- Monotolylbiguanide
- Pentaphenylbiguanide
- Pentatolylbiguanide
- Piperidin
- Piperazin
- Tetramethylammonium hydroxide
- Tetraphenylbiguanide
- Thioureas
- Trimethylsulphonium hydroxide

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Drugs and Fine Chemicals

Quiet Trading in Firm Market—Secondhands Hold Few Items at Cut Prices—All Major Materials Very Steady

Undertones were quiet last week in the market for drugs and fine chemicals. Trading proceeded along normal lines but quantities under demand were rarely stimulating to the market as a whole and left the local trade subject to a fair degree of competition. Price changes were few in number and no major material was affected. For the most part conditions as regarded raw materials favored the maintenance of prices for most manufactured products. The shading of prices was incidental to special transactions and rarely resulted in the open quoting of a new schedule of values.

Antipyrin brought slightly more money merely because the more cheaply held lots had moved into hands of buyers. The former price had been based on special holdings and hence the advance was to a very considerable extent a nominal one. Prices for that commodity in Europe remained rather firm. Resale chloroform of U.S.P. description was raised slightly but there was reason to believe that that also was a nominal movement in price. It was felt that competition on firm orders would result in the former price being accepted by the resellers.

Phenylhydrazin hydrochloride was in light demand and a lower quotation did little to stimulate buyers whose requirements were very modest. Podophyllin met the lower price of raw material and buyers benefited. Silver bullion was very easy all week and a net decline in prices resulted.

Quicksilver remained a strong article due to the absence of much unsold metal in this market. This absence of stocks was due to the failure of the monopoly abroad to offer shipment parcels. Only secondhand lots are available in Europe and England now and the price wanted does not encourage importation here without the presence of a demand larger than that now current.

Secondhand competition was a feature at times last week. Such sellers offered fair sized quantities of acetanilide, acetylsalicylic acid, bismuth subnitrate powder, and moderate amounts of potash iodide. The secondhand prices shaded the producers somewhat sharply. Menthol was strong due to the maintenence of replacement prices and the absence of a spot market totally free from unusual conditions. Actual consumers may purchase at one price from the stock of one large manufacturer. Others are forced to pay a premium over the minimum spot quotation in order to secure deliveries from regular importers.

Price Changes

Price changes during the past week were as follows:—

Advanced	Reduced
Antipyrin, 3c. per lb.	Phenylhydrazin hydrochloride, $1 per lb.
Chloroform, resale, 1c. per lb.	Podophyllin, 10c. per lb.
	Silver bullion, N.Y., ⅝c. per oz.
	London, ⅛ pence.
	nitrate, ½c. per oz.

Comparative Values

Index numbers compiled from thirty-five typical drugs and fine chemicals on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
183.1	183.1	183.1	173.5

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Acetanilide.—Business was reported somewhat slow in the open market. Secondhands were said to be taking orders at 33c. per pound. The price with the producers was 36c. to 37c. Aniline oil, one of the raw materials used in making this article, was reduced recently.

Acetone.—Though raw material has tended toward easier position, producers of acetone reported firm prices under influence of very steady demand.

Acetylsalicylic Acid.—Makers reported steady business and a firm price position at 85c. to 90c. per pound. Secondhand offerings changed hands at 83c. per pound.

Agar Agar.—Light stocks and a steady demand for prompt deliveries on account of some of the smaller buyers was responsible for the firm prices and strong undertone in this market. Cables from Japan made the future market very firm also.

Alcohol.—New prices went into effect under the influence of steady absorption of quantities due for delivery under existing contracts. Some concern was felt regarding the ability of one producer to meet all contract needs; a severe fire had damaged the New Orleans plant of this maker. However, it is now certain that deliveries will be made promptly through the medium of an increase in production in other units of the company. Therefore, no unexpected drain on other distillers is expected and the market goes into the most active period of the year in excellent shape, free from unstabilizing competition, and well prepared to take care of the consumption requirements of the country.

Aloin. — Firm prices prevailed, demand being very steady and consumption being about even with the normal expectations of the producers at this time of year. Raw material remained strong.

Antipyrin. — Quotations were 3c. higher at $1.48 to $1.60 per pound, according to seller and quantity. It was said that merchandise formerly offered at $1.45 had been sold into consumption leaving the market in somewhat improved position.

Bay Rum.—The quality of rum now offered at 85c. to 90c. per gallon was reported to be excellent and to be finding a ready market at that figure. No surplus stock exists here at the present time.

Bismuth.—Metal seemed to be somewhat easier, competition being noted once more. Furthermore, manufacturers of salts reported competition for business in subnitrate powder, some business being written as low as $1.95 per pound as compared with the majority price of $2.05 to $2.10 per pound as to maker.

Caffeine.—A somewhat low market prevailed with sellers quoting former prices and finding the interest of buyers somewhat sluggish in the matter of improvement.

Cadmium Metal.—Spot prices were strong, the supply of metal being very scarce and demand showing every indication of continued expansion. Reports from London made that market 3s. per pound with the production of Australia being readily absorbed.

Castor Oil.—Following the decline in prices during the previous week, the market took on a somewhat quiet tone with demand rather light and competition much in evidence.

CHICAGO, Sept. 5.—No change was registered in the prices on C.P. castor oil here the past week. Buying was of a routine nature and warehouse orders formed the principal part of the dealings. No improvement in quotations was disclosed, sellers being content to take on business at the prevailing prices, somewhat off from levels of some weeks ago. Ruling quotations, per pound, were:—No. 1, drums, car lots, 13c.; drums, less than car lots, 13½c.; barrels, car lots, 13¼c.; barrels, less than car lots, 13¾c.; five-gallon tins, 14¾c.; one-gallon tins, 16¾c.; No. 3, drums, car lots, 12½c.; drums, less than car lots, 13c.; barrels, car lots, 12¾c.; barrels, less than car lots, 12¼c.

Chloroform.—The resale price of this article went to 27c. to 28c. per pound and seemed to be somewhat firmer thereat. The makers' quotations for U.S.P. was firm at 28c. to 30c. per pound, according to producer. Technical was without change.

Cocoa Butter.—Weakness in the cocoa bean market continued to keep the cocoa butter market under the influence of depression and competition. Though prices were without further open change, they were rather soft, in the main.

Codliver Oil.—Local quotations were without change. Little has been doing in the medicinal grade of this material but a fair interest in poultry grades has been noted in some quarters. Prices cabled from Norway seemed to be rather firm.

Corn Syrup.—With a bumper corn

Current prices on drugs and fine chemicals, formerly printed on pages 4 and 6, are now printed at the end of this market report.

Valuable information on Imports and Exports of Drugs and Fine Chemicals is given in port lists beginning on page 5.

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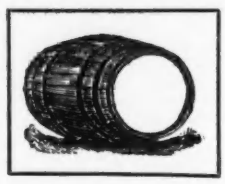
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crop in prospect, the undertone of the corn products market as a whole was easy. Most people interested in corn syrup were inclined to expect reductions in prices to be extended further.

Cream of Tartar.—Imported cream was in very light demand and the tendency seemed to be toward shading. Spot quotations were not openly altered. Domestic producers reported small business booked at steady prices.

Diethyleneglycol. — Monoethyl ether was firm at the advance made effective September 1. Prices for car lots were then set at 13c., while less than car lot quantities were charged at the rate of 14c. to 15c. Other articles within this group were unchanged.

Ergotin.—The tendency in raw material prices was downward but in view of the generally poor agricultural crops in Spain this year, makers of ergotin were inclined to go slow in reducing prices further; they awaited further developments in the raw material situation.

Ethyl Methyl Ketone. — Steady but not very heavy demand was reported. Production was said to be being absorbed promptly, thus keeping prices to a firm position.

Formaldehyde.—Rather conservative trading was the rule. Prices were firm, reflecting the strength noted in raw materials during recent weeks.

Glycerin.—The market lagged with demand disappointing in volume and giving little promise of early revival. Sales of dynamite were few and far between. Holdings of crude were rather large but the price views of holders were firmly maintained. By contrast, the failure of buyers to take hold in amounts more than covered actual needs served but badly to relieve the holders of crude of the stocks which press rather strongly for movement. No changes in prices were reported in any kind of glycerin.

CHICAGO, Sept. 5.—The market for glycerin held unchanged to firmer in price for the week on practically all grades. Trading was of a fairly extensive nature, and the trade continued to look forward to a stimulating effect of the colder weather on anti-freeze material, which is expected to have some reflection in the whole glycerin market. Small lot buying was the principal business. Ruling quotations per pound were:—Dynamite, 12½c. to 13c.; soaplye, crude, 80 percent basis, 7½c.; chemically pure, car lots, returnable drums, 14c. to 14½c.; chemically pure, less than car lots, returnable drums, 15c.; saponification, 88 percent basis, 8½c. to 8¾c.

Guaiacol Carbonate.—The open quotation was usually minimum at $1.75 per pound but it was certain that from time to time sales were made at $1.70. Demand was sluggish, the season being rather slow in getting underway.

Haarlem Oil.—Import costs were very firm and as demand has shown a steady quality, prices have been well maintained for some time past. Domestic oil, also, met a satisfying request.

Iodides.—Virtually all business went to the makers at their open quotations. However, limited quantities of U.S.P. goods were available in the open market at 10c. under the producers' schedule, such merchandise coming from resale quarters, it was said.

Menthol.—In the open market at least $5.25 per pound would have to be paid for a substantial quantity. This price compared with $5 per pound quoted by the largest individual buyer of menthol for consumption, at which quotation he was supplying dealers and consumers; only small needs were being taken care of at that figure. This holder of a large stock in warehouses was inclined to stave off the advancing market which had featured Japanese affairs recently. The situation as a whole is most unsettled. In the meantime, actual consuming demand here is none too active.

Mercurials. — The strength in raw material, actual and potential, was evidenced in the mercurial group by reason of the absence of competition and the sturdy maintenance of quotations recently prevailing. Demand was normal and generally satisfactory.

Methanol.—One of the leading factors in this article recently indicated that none but current contracts were being filled at present prices. Last week, other factors prominent in the trade stated that the supply of methanol was adequate to meet all consuming requirements, though no surplus existed. According to the latest figures available, stocks of crude at the plants July 31 were 1,019 gallons less than on June 30, this year, and 7,398 gallons less than a year ago. The stocks of crude at the refineries showed a decrease of 281,406 gallons from the stocks as of June 30 and a decrease of 817,698 gallons when compared with stocks at the end of July, 1927. The stock of crude at the refineries has decreased 849,075 gallons since January 31, 1928. Stocks of refined natural methanol decreased 96,587 gallons during July this year and they were 110,313 gallons less than on July 31, last year. According to the statistics in hand now, consumption of refined natural methanol during the period January-July, this year, was 531,433 gallons greater than during the equivalent period, 1927.

Methyl Acetone.—Reports generally suggested that the available supply of this article was none too large and that the market was in quite strong position because of the lack of a surplus stock. Prices were firmly maintained in a market showing little or no competition.

Phenylhydrazin Hydrochloride. — Producers quoted prices $1 less than had prevailed recently. The market was $9 per pound, due to competition of a somewhat keen character.

Quicksilver. — The spot market ranged $128 to $130 per flask and was a very firm affair, due to the absence of offerings from abroad and the rather small stock of metal unsold in this market at the present time. No further developments anent the foreign combination of Spanish and Italian interests have been made public.

Quinine.—Settlement of the differences between the government of the United States and the Dutch manufacturers of quinine seemed to be fairly certain last week. Formal announcement of the end of the affair is expected to come in the very near future.

Silver Nitrate. — The schedule of prices since the last report prevailed at the following levels, covering quantities of 100 ounces; small lots cost from 1c. to 2c. more, and quantities of 500 ounces about 1c. less; comparison of New York and London prices for bullion is also provided:—

	Per ounce		
		Bullion	
	Nitrate Cents.	New York Cents.	London Pence.
Saturday	41⅛	58⅜	26⅛
Monday	*	*	*
Tuesday	41⅛	58¼	26⅛
Wednesday	40⅞	58⅛	26⅝
Thursday	40⅝	57⅞	26⅛
Friday	40⅝	57¾	26⅛

* Holiday.

Strychnine.—Excellent demand was reported and prices were very firm at the recent advance. Competition was not very keen owing to the rather high cost of production acting as a preventative to shading of prices.

Venice Turpentine.—Quotations were ½c. higher at 29c. to 30c. per pound for true Venice turpentine. Demand was steady and indicative of a normal consuming requirement on the part of buyers.

Current Prices

(For late price changes, see page 2)

Acetaldehyde, drums	lb.	.18½@ .21
Acetanilide, U.S.P., barrels	lb.	.36 @ .37
Acetone, car lots, drums	lb.	.15 @ —
less car lots, drums	lb.	.16 @ .17
methyl (see methyl acetone).		
Acetone oil, barrels	gal.	1.15 @ 1.25
Acetphenetidin, barrels	lb.	1.40 @ 1.50
Acetylsalicylic acid, barrels	lb.	.85 @ .90
Aconitine alkaloid, amorphous, vials	oz.	20.00 @ —
crystals, vials	oz.	30.00 @ —
Adeps lanae, anhydrous, barrels,	lb.	.14 @ .16
hydrous, barrels	lb.	.13½@ .15
Agar agar, No. 1, bales	lb.	1.25 @ 1.26
No. 2, bales	lb.	1.05 Nom.
No. 3, bales	lb.	.85 @ .87
Albumen, milk, f.o.b. works, sacks	lb.	.05 @ .05½
vegetable, edible, works, barrels	lb.	.65 @ .70
Alcohol, benzyl, bottles	lb.	1.25 @ 1.35
denatured, completely, No. 1, 188 proof, works, car lots, barrels	gal.	.55 @ —
drums	gal.	.48 @ —
less car lots, barrels	gal.	.58 @ .63
drums	gal.	.51 @ .56
tanks	gal.	.46 @ —
completely, No. 5, 188 proof, works, car lots, barrels,	gal.	.54 @ —
drums	gal.	.47 @ —
less car lots, barrels	gal.	.57 @ .62
drums	gal.	.50 @ .55
tanks	gal.	.45 @ —
(180 proof, C.D., 1c. per gal. less than 188 proof).		
special No. 1, 190 proof, works, car lots, barrels,	gal.	.54 @ —
drums	gal.	.47 @ —
less car lots, barrels	gal.	.57 @ .62
drums	gal.	.49 @ .54
tanks	gal.	.44 @ —
Delivered prices in drums exceed works prices, according to freight distances, as follows:—		
Zone 1	1c. per gal.	
Zone 2	2c. per gal.	
Zone 3	3c. per gal.	
Zone 4	4c. per gal.	
ethyl, 190 proof (from molasses), barrels	gal.	2.69½@ 2.79½
190 proof (from grain), barrels	gal.	2.72 @ 2.77
absolute, drums	gal.	4.70 @ 4.80
isopropyl, 91 p.c., drums	gal.	1.05 @ 1.35
98 p.c., drums	gal.	1.30 @ 1.60
methyl (see methanol).		
Aldehol, denaturing grade, works, drums or tanks	gal.	.85 @ .92
Aldol, technical, car lots, drums,		.27 @ —
less car lots, drums	lb.	.31 @ —
Aloin, barrels, cans	lb.	1.15 @ 1.20
Ambergris, gray, tins	oz.	36.00 @40.00
Amidopyrene, cans	lb.	4.30 @ 4.60
Ammonia acetate, kegs	lb.	.34 @ .36
borate, bottles	lb.	.35 @ —
carbonate, U.S.P., lump, barrels	lb.	.12 @ .16
powder, barrels	lb.	.13 @ .17
chloride, U.S.P., granular, barrels	lb.	.13 @ .14
phosphate, dibasic, barrels	lb.	.40 @ .43
monobasic, barrels	lb.	.40 @ .42
salicylate, U.S.P., kegs	lb.	1.15 @ 1.20
Amyl acetate, technical, works, tanks	gal.	1.65 @ —
car lots, drums, works	gal.	1.67 @ —
less car lots, drums, works,	gal.	1.75 @ 2.25
high test, drums	gal.	1.90 @ —
Antipyrin, bulk, cans	lb.	1.48 @ 1.60
Apomorphine, cans	oz.	22.00 @22.70
Arecoline hydrobromide, bottles, vials	oz.	7.75 @ 8.75
resale, bottles, vials	oz.	6.25 @ 6.50
Aristol (see Iodides, thymol).		
Aspirin (see acetylsalicylic acid).		
Atropine alkaloid, vials	oz.	6.50 @ 7.00
sulphate, vials	oz.	2.65 @ 3.00
Barbital, cases	lb.	3.65 @ 3.90
Barium chlorate, kegs	lb.	.14 @ .15
chloride, C.P., barrels	lb.	.17 @ .18
nitrate, casks	lb.	.08¼@ .08½
sulphate, X-ray, barrels	lb.	.14 @ .15
Bay rum, domestic, barrels	gal.	.70 @ .75
Imported, barrels	gal.	.85 @ .90
Betanaphthol benzoate, boxes, kegs	lb.	2.35 @ 2.50
Bismuth citrate, U.S.P., VIII, boxes	lb.	2.75 @ 2.80
glycerite, N.F., demijohns	lb.	.71 @ .76
hydroxide, boxes, fiber drums,	lb.	3.05 @ 3.10
metal, ton lots	lb.	1.70 @ —
nitrate crystals, jars	lb.	1.85 @ 1.90
oxide, powder, boxes, fiber, drums	lb.	3.45 @ 3.50
Bismuth oxychloride, boxes, fiber drums	lb.	3.10 @ 3.15
subbenzoate, boxes, fiber drums	lb.	3.25 @ 3.30
subcarbonate, U.S.P., barrels, fiber drums	lb.	2.45 @ 2.50
X-ray, bottles, fiber drums	lb.	3.40 @ 3.45
subgallate, barrels, fiber drums	lb.	2.50 @ 2.55
subiodide, bottles, fiber drums	lb.	4.25 @ 4.30
subnitrate, cones, bottles, fiber drums	lb.	3.20 @ 3.25
powder, bottles, fiber drums	lb.	2.05 @ 2.10
subsalicylate, 62@66 p.c., barrels	lb.	2.90 @ 2.95
Bismuth-ammonium citrate, U.S.P., scales, cans	lb.	5.50 @ 5.55
Borax, crystals, car lots, freight allowed, barrels	lb.	.03 @ —
kegs	lb.	.03½@ —
sacks	lb.	.02¾@ —
granular and powder, car lots, freight allowed, barrels	lb.	.02¾@ —
kegs	lb.	.03¼@ —
sacks	lb.	.02½@ —
Bromides—		
ammonium, granular, barrels	lb.	.47 @ .48
cadmium, jars, bottles	lb.	1.20 @ 1.25
calcium, jars	lb.	.65 @ .69
ethyl, pure, bottles	lb.	.85 @ .95
lithium, jars	lb.	1.85 @ 1.90
potassium, domestic, barrels	lb.	.42 @ .43
sodium, domestic, barrels	lb.	.42 @ .43
strontium, barrels	lb.	.51 @ .52
Bromine, purified, cases	lb.	.45 @ .47
Bromoform, U.S.P., jars	lb.	1.80 @ 1.90
Brucine alkaloid, cans	oz.	.54 @ .65½
sulphate, cans	oz.	.04 @ .45½
Butyric ether, cans	lb.	1.10 @ 1.20
Cadmium metal, cases	lb.	.70 @ .75
Caffeine alkaloid, cans, cases	lb.	2.80 @ 2.95
citrated, cans	lb.	2.00 @ 2.40
hydrobromide, jars, bottles	lb.	4.80 @ 5.00
Calcium lactate, U.S.P., barrels,	lb.	.52 @ .54
sulphide, crude, drums	lb.	.21½@ .24
Camphor, see Gums.		
Camphor, monobromate, boxes, kegs	lb.	1.85 @ 1.95
Cantharides, Chinese, cases	lb.	.50 @ .55
powdered, boxes	lb.	.80 @ .82
Russian, cases	lb.	.60 @ .65
powdered, boxes	lb.	.80 @ .82
Castile soap, white, per case		15.00 @ —
Castor oil, medicinal, car lots, barrels	lb.	.12¾@ —
cases	lb.	.13¾@ —
drums	lb.	.12½@ —
less car lots, barrels	lb.	.13 @ —
cases	lb.	.14 @ —
drums	lb.	.12¾@ —
No. 3, car lots, barrels	lb.	.12¾@ —
cases	lb.	.13¼@ —
drums	lb.	.12 @ —
less car lots, barrels	lb.	.12½@ —
cases	lb.	.13½@ —
drums	lb.	.12¼@ —
Castoreum, cans, car lots	lb.	10.00 @12.00
Chalk, precipitated, car lots, extra light, casks	lb.	.03½@ .04¼
heavy, casks	lb.	.02 @ .03½
light, casks	lb.	.03¼@ .03¾
Charcoal, willow, powder (see Dry Colors, page 3).		

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Chloral hydrate, drums	lb.	.75 @	.80
Chloroform, technical, drums	lb.	.18 @	.20
U.S.P., drums	lb.	.28 @	.30
resale, drums	lb.	.27 @	.28
Chloramine, U.S.P., barrels	lb.	1.50 @	2.50
Chromium sulphate, scales, boxes, cans, fiber drums	lb.	.59 @	.60
sulphate, pearls, boxes, cans, fiber drums	lb.	.46 @	.51
powder, boxes, cans, fiber drums	lb.	.51 @	.56
Chrysarobin, cans	lb.	3.65 @	3.75
Cinchonidine alkaloid, cans	oz.	.60 @	.65
sulphate, cans	oz.	.35 @	—
Cinchonine, alkaloid, cans	oz.	.38 @	.43
sulphate, cans	oz.	.25 @	—
Citric acid (see Industrial Chemicals).			
Citrates—			
ammonium, kegs	lb.	.85 @	.90
iron, U.S.P. VIII, cans	lb.	.94 @	.99
iron-ammonium, brown scales, cans	lb.	.69 @	—
green scales, cans	lb.	.65 @	.67
potash, barrels	lb.	.51 @	.53
soda, U.S.P. VIII, cans	lb.	.38 @	.40
U.S.P., X, cans	lb.	.45 @	.47
Cocaine hydrochloride, cans	oz.	8.50 @	8.75
Cocoa butter, bulk, bags	lb.	.29½@	.30
fingers, cases	lb.	.40 @	.45
Codeine alkaloid, cans	oz.	10.20 @	10.25
hydrochloride, cans	oz.	9.20 @	9.25
nitrate, cans	oz.	9.20 @	9.25
phosphate, cans	oz.	7.75 @	7.80
salicylate, cans	oz.	7.75 @	7.80
sulphate, cans	oz.	8.25 @	8.30
Codliver oil, Norwegian, bbls.	bbl.	42.00 @	44.00
Colchicine alkaloid, vials	oz.	20.00 @	—
Collodion, U.S.P., drums	lb.	.22 @	.23
flexible, U.S.P., drums	lb.	.24 @	.25
Corn syrup, 42 deg., barrels	100 lbs.	4.11 @	4.36
43 deg., barrels	100 lbs.	4.16 @	4.31
Coumarin, cans	lb.	3.60 @	4.00
resale, cans	lb.	3.50 @	3.55
Cream tartar, domestic, barrels, fiber drums	lb.	.28 @	—
kegs	lb.	.27½@	—
imported, barrels	lb.	.26 @	.26½
Creosote, U.S.P., bottles	lb.	.40 @	.42
carbonate, bottles, carboys	lb.	1.50 @	1.60
Crotonaldehyde, technical, car lots, drums	lb.	.32 @	—
less car lots, drums	lb.	.36 @	—
drums	lb.	.10 @	—
less car lots, works, drums,			
Diethyleneglycol, car lots, works,	lb.	.13 @	—
monoethyl ether, car lots, drums	lb.	.13 @	—
less car lots, drums	lb.	.14 @	.15
monobutyl ether, car lots, drums	lb.	.25 @	—
less car lots, drums	lb.	.28 @	—
Dover's powder, U.S.P., cans	lb.	2.45 @	2.50
Duboisine sulphate, vials	oz.	30.00 @	—
Emetine, hydrochloride, bottles, vials	oz.	35.00 @	36.00
resale, bottles, vials	oz.	26.00 @	28.00
Epsom salt, domestic, technical, bags, barrels	100 lbs.	1.70 @	1.90
U.S.P., car lots, bags	100 lbs.	2.15 @	—
car lots, barrels	100 lbs.	2.25 @	—
less car lots, bbls	100 lbs.	2.50 @	3.00
imported, technical, bags	100 lbs.	1.15 @	1.20
U.S.P., barrels	100 lbs.	1.95 @	2.00
Ergotin, jars	lb.	18.50 @	19.00
Eserine salicylate, bottles, vials,	oz.	40.00 @	—
sulphate, bottles, vials	oz.	40.00 @	—
Ether, concentrated, drums	lb.	.15 @	—
U.S.P., anesthesia, drums	lb.	.20 @	—
U.S.P., 1880, drums	lb.	.37 @	.38
washed, drums	lb.	.35 @	.36
Ether, nitrous, carboys, bottles,	lb.	.70 @	.92
Ethyl chloride, drums	lb.	.22 @	.24
Ethyl-methyl ketone, drums	lb.	.30 @	—
Ethyleneglycol, refined, drums	lb.	.25 @	.30
technical, cans	gal.	3.60 @	3.75
Eucalyptol, cans	lb.	1.00 @	1.05
Eugenol (see Essential Oils).			
Formaldehyde, car lots, barrels, f.o.b. works	lb.	.08½@	—
less car lots, barrels, f.o.b. spot	lb.	.08¾@	.09
Furfural, drums	lb.	.19¼@	—
tanks	lb.	.16¾@	—
works, drums	lb.	.17½@	—
tanks	lb.	.15 @	—
Fusel oil (see Lacquer Materials).			
Gelatin, silver, cases	lb.	.58 @	.59
Glycerin, C.P., drums extra	lb.	.15 @	.15½
cans	lb.	.16½@	.17
dynamite, drums, incl	lb.	.12¼@	.12½
saponification, loose, drums	lb.	.08¾@	.08½
soaplye, loose, drums	lb.	.07½@	.07¾
30 degrees, yellow, drums	lb.	.14½@	.15
Glycerophosphates—			
calcium, barrels, cans	lb.	1.40 @	1.55
manganese, barrels, cans	lb.	2.90 @	3.10
potash solution, 75 p.c., barrels, cans	lb.	1.35 @	1.50
soda, crystals, barrels, cans	lb.	1.40 @	1.55
solution, U.S.P., bottles, cans, demijohns	lb.	1.05 @	1.20
Guaiacol carbonate, boxes, kegs	lb.	1.70 @	2.50
liquid, bottles, demijohns	lb.	1.75 @	2.00
Haarlem oil, domestic, cases, per gross		3.25 @	3.30
imported, cases, per gross		3.50 @	3.55
Hexamethylenetetramine, domestic, drums	lb.	.52 @	.54
Homatropine hydrobromide, bottles, vials	oz.	13.50 @	14.50
Hydrastine, alkaloid, vials	oz.	20.50 @	21.00
resale, vials	oz.	19.00 @	20.00
hydrochloride, vials	oz.	20.50 @	21.00
sulphate, vials	oz.	22.50 @	—
Hydrogen peroxide, barrels	lb.	.04 @	—
bottles	gross	7.75 @	18.50
Hydroquinone, kegs	lb.	1.25 @	1.30
Hyoscine hydrobromide, vials	oz.	13.00 @	13.50
Hyoscyamine alkaloid, vials	oz.	25.00 @	—
hydrobromide, vials	oz.	40.00 @	—
sulphate, vials	oz.	25.00 @	—
Hypophosphites—			
ammonium, barrels	lb.	1.10 @	1.20
calcium, cans	lb.	.60 @	.65
iron, cans	lb.	1.60 @	1.65
magnesium, cans	lb.	1.15 @	1.20
potash, cans	lb.	.80 @	.85
soda, cans	lb.	.70 @	.75
Ichthyol, bottles	lb.	4.00 @	4.25
Iodides—			
ammonium, jars	lb.	5.20 @	—
arsenous, bottles, jars	lb.	6.35 @	6.85
arsenous-mercuric solution, bottles	lb.	.25 @	—
barium, bottles	lb.	5.25 @	—
cadmium, bottles, jars	lb.	4.55 @	—
calcium, bottles, jars	lb.	4.35 @	—
copper, bottles	lb.	6.22 @	6.27
ethyl, bottles	lb.	6.35 @	—
iron, bottles	lb.	4.30 @	4.40
syrup, demijohns	lb.	.35 @	.65
lead, jars	lb.	3.20 @	—
lithium, bottles, jars	lb.	5.40 @	—
manganese, bottles, jars	lb.	6.40 @	—
mercury, green or yellow, jars, kegs	lb.	4.80 @	4.96
red, jars, kegs	lb.	4.89 @	5.05
potassium, barrels, fiber drums	lb.	3.75 @	3.80
sodium, jars	lb.	4.25 @	4.30
starch, bottles	lb.	1.77 @	—
strontium, jars	lb.	4.00 @	4.10
sulphur, bottles, jars	lb.	4.55 @	—
thymol, barrels	lb.	6.50 @	6.75
zinc, bottles, jars	lb.	5.20 @	5.70
Iodine, resublimed, kegs	lb.	4.65 @	4.70
Iodoform, kegs	lb.	6.00 @	6.05
Iron chloride, U.S.P., lump, barrels	lb.	.06 @	.08
solution, U.S.P., carboys	lb.	.05½@	.07
phosphate, ferric, cans	lb.	.55 @	.60
ferrous, cans	lb.	.29 @	.34
pyrophosphate, cans	lb.	.74 @	—
reduced, 90 percent, cases	lb.	.65 @	.75
sulphate, U.S.P., crystals, barrels	lb.	.04½@	.05
Isinglass, Russian, cases	lb.	4.50 @	6.50
Lanolin (see adeps lanae).			
Licorice extract, mass, cases	lb.	.18 @	.20
powdered, barrels	lb.	.33 @	.34
Lithium carbonate, barrels	lb.	1.50 @	1.60
citrate, barrels	lb.	1.70 @	1.80
Magnesia, calcined, U.S.P., barrels	lb.	.45 @	.60
carbonate, technical, bags	lb.	.06 @	.07
barrels	lb.	.07 @	.08
U.S.P., barrels	lb.	.08 @	.09
Manganese dioxide, precipitated, U.S.P., kegs	lb.	.40 @	.50
Menthol, imported, cases	lb.	5.00 @	5.10
synthetic, tins	lb.	3.00 @	3.25
Mercurials, hard—			
bisulphate, kegs	lb.	1.63 @	—
calomel, boxes, kegs	lb.	2.05 @	—
corrosive sublimate, fiber drums, kegs	lb.	1.65 @	1.80
oxide, black, fiber drums, kegs	lb.	3.95 @	4.20
yellow, U.S.P., fiber drums, kegs	lb.	2.57 @	2.72
red precipitate, fiber drums, kegs	lb.	2.16 @	—
white precipitate, fiber drums, barrels	lb.	2.24 @	—
soft—			
blue mass, U.S.P., cans, kegs,	lb.	1.02 @	1.05
citrine ointment, jars, tubs,	lb.	.67 @	—
mercury and chalk, fiber drums, kegs	lb.	.92 @	—
ointment, 30 p.c., cans	lb.	.91 @	—
33⅓ p.c., cans	lb.	.94 @	—
50 p.c., cans	lb.	1.28 @	—
Methanol, denaturing grade, tanks	gal.	.50 @	—
95 p.c., barrels	gal.	.54 @	.56
drums	gal.	.48 @	.50
tanks	gal.	.45 @	—
97 p.c., barrels	gal.	.56 @	.59
drums	gal.	.50 @	.53
tanks	gal.	.47 @	—
purified, barrels	gal.	.57 @	.59
drums	gal.	.51 @	.53
tanks	gal.	.50 @	—
synthetic, car lots, drums	gal.	.47 @	—
less car lots, drums	gal.	.51 @	—
tanks, works, frt. alld	gal.	.42½@	—
Methyl acetone, drums	gal.	.83 @	.87
tanks	gal.	.80 @	—
salicylate, drums	lb.	.40 @	.43
tins	lb.	.42 @	.45
resale, tins	lb.	.40 @	.41
Methylene blue, medicinal, kegs,	lb.	2.00 @	2.25
Milk powder, skimmed, barrels,	lb.	.10 @	.12
unskimmed, barrels	lb.	.26 @	.28
Morphine acetate, bottles, vials,	oz.	7.75 @	7.80
alkaloid, cans	oz.	9.65 @	9.70
ethyl hydrochloride, vials	oz.	9.25 @	9.30
hydrobromide, cans	oz.	7.75 @	7.80
hydrochloride, cans	oz.	7.75 @	7.80
sulphate, cans	oz.	7.75 @	7.80
Musk, Cabardine, grained, bottles	oz.	No stocks.	
pods, bottles	oz.	No stocks.	
Tonquin, grained, bottles	oz.	30.00 @	32.00
pods, bottles	oz.	20.00 @	21.00
Opium, U.S.P., cases	lb.	12.00 @	13.00
granulated, U.S.P., cans	lb.	13.00 @	14.00
powdered, U.S.P., cans	lb.	13.00 @	14.00
Oxalates—			
ammonium, crystals, barrels, kegs	lb.	.28 @	.30
cerium, barrels	lb.	.32 @	.33
iron, scales, cans	lb.	.90 @	.91
powdered, kegs	lb.	.52 @	.53
iron-ammonium, barrels, kegs,	lb.	.34 @	.36
potassium, kegs	lb.	.49 @	.50
sodium, barrels, kegs	lb.	.30 @	.32
potassium, crystals, barrels	lb.	.23 @	.25
sodium, neutral, powder, barrels	lb.	.39 @	.43
Paraldehyde, technical, drums	lb.	.20½@	.23
U.S.P., carboys	lb.	.53 @	.55
Paraformaldehyde, kegs	lb.	.40 @	.42½
Phenolphthalein, U.S.P., barrels, drums	lb.	1.10 @	1.20
Phenylhydrazin hydrochloride, bottles	lb.	9.00 @	—
Pilocarpine hydrochloride, bottles, vials	oz.	3.25 @	3.50
resale, vials	oz.	2.50 @	2.75
nitrate, bottles, vials	oz.	3.25 @	3.50
Podophyllin, U.S.P., tins	lb.	4.25 @	4.30
Potash acetate, barrels	lb.	.29 @	.30
bicarbonate, U.S.P., crystals, barrels	lb.	.13 @	.14
granular, barrels	lb.	.13 @	.17
carbonate, U.S.P., granular, barrels	lb.	.12 @	—
powder, fine, barrels	lb.	.14 @	—
chlorate, U.S.P., granular, kegs	lb.	.16 @	.17
powder, kegs	lb.	.11 @	.14
guaiacol sulphonate, cans	lb.	1.95 @	2.25
permanganate, U.S.P., drums,	lb.	.15 @	.15½
sulphate, N.F., barrels	lb.	.13 @	.16
Quicksilver, 76-lb. flasks, net	per flask.	128.00 @	129.00
Quinidine alkaloid, cans	oz.	.70 @	.75
sulphate, cans	oz.	.50 @	—
Quinine acetate, cans	oz.	.75 @	—
alkaloid, cans	oz.	.55 @	—
arsenate, cans	oz.	.75 @	—
arsenite, cans	oz.	.75 @	—
benzoate, cans	oz.	.75 @	—
bisulphate, cans	oz.	.40 @	—
Japanese, tins	oz.	.40 @	—
resale	oz.	.35 @	.39
Swiss	oz.	.40 @	—
citrate, cans	oz.	.51 @	—
dihydrobromide, bottles	oz.	.54 @	—
dihydrochloride, bottles	oz.	.54 @	—
ethylcarbonate, cans	oz.	.58 @	—
ferrocyanide, cans	oz.	.78 @	—
formate, cans	oz.	.73 @	—
glycerophosphate, cans	oz.	.80 @	—
hydrobromide, cans	oz.	.50 @	—
hydrochloride, cans	oz.	.50 @	—
hydrochloride and urea, cans	oz.	.78 @	—
hydrochlorosulphate, cans	oz.	.54 @	—
hydroiodide, cans	oz.	.78 @	—
hypophosphite, cans	oz.	.70 @	—
lactate, cans	oz.	.66 @	—
phosphate, cans	oz.	.62 @	—
salicylate, cans	oz.	.52 @	—
sulphate, domestic, tins	oz.	.40 @	—
Dutch, tins	oz.	.40 @	—
Japanese, tins	oz.	.40 @	—
Swiss, tins	oz.	.40 @	—
sulphocarbolate, cans	oz.	.78 @	—
tannate, cans	oz.	.41 @	—
tartrate, cans	oz.	.78 @	—
valerate, cans	oz.	.78 @	—
Quinine-urea hydrochloride, cans,	oz.	.54 @	—
Resorcinol, U.S.P., f.o.b. works, cans, kegs	lb.	1.75 @	—
Rochelle salt, crystals, boxes, kegs	lb.	.23 @	—
powder, barrels, kegs	lb.	.23 @	—
Rosewater, triple, per demijohn		5.50 @	5.75
Saccharin, 1,000 lb. lots, cans	lb.	1.70 @	—
smaller lots, cans	lb.	1.75 @	1.90
Salicin, cans	lb.	4.65 @	5.75
Salol, kegs	lb.	.90 @	.95
Santonin, crystals, cans	lb.	130.00 @	140.00
Saponin, tins	lb.	1.15 @	1.50
Seidlitz mixture, barrels, kegs,	lb.	.18½@	—
Silver bullion	oz.	.57¾@	—
nitrate, vials	oz.	.40⅝@	—
nucleinate, vials	oz.	.35 @	.36
proteinate, vials	oz.	.30 @	.37
Soda benzoate, U.S.P., bbls	lb.	.50 @	.53
biphosphate, U.S.P., barrels	lb.	.30 @	.34
cacodylate, jars	lb.	4.75 @	5.90
caustic, U.S.P., sticks, cans	lb.	.19 @	.23
cyanide (see Industrial Chemicals, page 10).			
perborate, N.F., barrels	lb.	.20 @	.25
phosphate, dibasic, U.S.P., granular, barrels	lb.	.07½@	.08
salicylate, boxes	lb.	.47 @	.49
resale, boxes	lb.	.45 @	.46
sulphocarbolate, barrels	lb.	.30 @	.32
Sparteine sulphate, bottles, cans,	oz.	.70 @	.80
Strontium carbonate, pure, barrels	lb.	.25 @	.30
Strychnine acetate, cans	oz.	.65 @	—
alkaloid, crystals, cans	oz.	.66 @	—
powder, cans	oz.	.56 @	—
arsenate, cans	oz.	.65 @	—
glycerophosphate, cans	oz.	.65 @	—
hydrobromide, cans	oz.	.65 @	—
hydrochloride, cans	oz.	.65 @	—
hypophosphite, cans	oz.	.75 @	—
nitrate, cans	oz.	.60 @	—
phosphate, cans	oz.	.55 @	—
sulphate, crystals, cans	oz.	.56 @	—
powder, cans	oz.	.46 @	—
Sugar coloring, barrels	gal.	.72 @	.73
Sugar of milk, barrels	lb.	.21 @	.21½
Sulphonmethane, kegs	lb.	2.65 @	2.75
Sulphonethylmethane, kegs	lb.	2.85 @	3.95
Sulphur, commercial (see Industrial Chemicals).			
flowers, bags	100 lbs.	3.10 @	3.65
barrels	100 lbs.	3.45 @	4.00
precipitated, kegs	lb.	.15 @	.17
Tartar emetic, technical, crystals, barrels	lb.	.27¼@	.27½
powder, barrels	lb.	.27½@	.27⅝
U.S.P., powder, barrels	lb.	.32½@	.34
Tartaric acid (see Industrial Chemicals).			
Terebene, cans	lb.	.75 @	85
Theobromine, alkaloid, cans	lb.	1.70 @	2.25
sodiosalicylate, cans	lb.	2.10 @	2.25
Terpin hydrate, kegs	lb.	.45 @	.4e
Thymol, bottles	lb.	2.50 @	2.65
Vanillin, tins	lb.	6.25 @	6.80
Venice turpentine, true, cases	lb.	.29 @	.30
Witch hazel extract, distilled, N.F., barrels	gal.	.70 @	.90
Yohimbine hydrochloride, vials	oz.	2.75 @	3.50
Zinc carbonate, precip., U.S.P., powder, barrels	lb.	.28 @	.30
oxide, U.S.P., barrels	lb.	.14½@	.18
stearate, U.S.P., barrels	lb.	.24 @	.26
sulphocarbolate, N.F., barrels,	lb.	.28 @	.30

Shellac Bleachers Told Benefits of Association

The success of the Industrial Alcohol Institute in the stabilization of the industry was told to the American Bleached Shellac Manufacturers' Association at its meeting August 28 by Harry Pfeffer, president of the American Solvents & Chemical Corporation. The shellac bleachers are confronted with problems similar to those which, a few years ago, disorganized the alcohol industry through over-production and selling below cost. They invited Mr. Pfeffer to relate the experiences of his industry in its endeavor to return to a business basis.

The meeting which was held at the Block-Hall Club, this city, was one of the most successful held by the shellac bleachers' association. Representatives of all the Western members, as well as of the local members, were present. A luncheon preceded the business of the occasion.

A special meeting of the shellac bleachers' association was held the next day at noon to transact routine business and to consider the address of Mr. Pfeffer in its possible application to the successful solution of trade problems confronting the bleachers. Uncontrolled production, unrestricted price-cutting, and lack of much information that might be legally circulated among the members of the association have at times kept the shellac bleachers very close to "red ink" on financial statements, if not actually experiencing losses.

The Tuesday meeting led to a decision to have a committee appointed by the president, Rudolph Zinsser, of William Zinsser & Co., this city, to investigate the entire situation that has led to highly unsatisfactory financial returns to the bleachers. The matter of open prices, open contracts, and limitation of the time terms in bleached shellac contracts, including the question of quantities to be sold over any given period of time, will be studied by the committee. When ready, the committee will report to the members of the association, at which time the main body will consider and take action on such recommendations as may be made.

Hungary Botanical Exports

Hungarian exports of important botanical drugs to the United States compared, according to information received by the Department of Commerce from the vice-counsel at Budapest, in 1927 and 1926, as follows.—

	1927		1926	
	Pounds.	Value.	Pounds.	Value.
Belladonna	21,046	$1,997	25,666	$2,241
Chamomile	144,389	17,487	63,865	8,187
Henbane	16,687	1,578	37,245	3,804
Horehound	32,070	1,104	37,479	1,615
Stramonium	100,953	8,744	135,718	9,516

Nutmeg and Mace Prices To Be Fixed in Grenada

The spice trade of Grenada, B. W. I., has formed an association with headquarters at St. George's. The chief purpose of the organization is the stabilization of prices for nutmeg and mace. It is planned that the board of control will fix prices for fortnightly periods on a c.a.f. New York basis.

Operations of the association will be directed toward the following purposes:—

(a) To do all acts and things which the association shall deem conducive to obtaining the highest possible prices in the several markets for nutmegs and mace produced in the colony of Grenada.

(b) To regulate the minimum prices, which from time to time, members of the association may accept for nutmegs and mace exported from the colony of Grenada.

(c) To cooperate with any association or any other body in any part of the world having objects similar to the objects of this association.

Chicago Drug and Chemical Trade Organizes for Fair

Ottman M. Krembs, president of Krembs & Co., has been appointed chairman of the committee which will represent the drug, chemical and medicine industries of Chicago in the preparations for the centennial world's fair in that city in 1933.

The following have been selected by Mr. Krembs to serve with him on the committe:—R. A. Whidden, vice-president of Bauer & Black; W. K. MacIntosh, president of the Liquid Carbonic Company; B. F. Zimmer, vice-president of Fritzsche Brothers; Clarence Morgan, president of the Clarence Morgan Company; Leo A. Lanigan, and C. B. McConnell.

Ralph McClintock, of the MacLac Company, shellac bleacher and importer, this city, is motoring through New England and will visit Quebec.

John Stoner, adviser in shellac purchases for William Zinsser & Co., this city, will return from his vacation tomorrow.

Arrangements have been made to erect a plant in Porto Rico for the conversion into powder form of surplus juice from the canning of grapefruit and pineapples.

Paul S. Shepard, assistant treasurer of the James W. Byrnes Shellac Company, Inc., this city, returned last week from a vacation spent in the summer colony, near New London.

John R. Anderson, of John R. Anderson & Co., shellac broker, this city, left by motor September 7 for Lake Placid, N. Y., where he will spend a week with Mrs. Anderson at the Whiteface Inn.

Exports of patchouli leaves from Penang, Straits Settlements, totaled 462 tons in 1927, compared with 210 tons in the preceding year. Sixty percent of the 1927 exports were destined for North American ports.

Exports of essential oils from Reunion during the first quarter of 1928 comprised the following:—Geranium oil, 80,127 pounds ($180,030); vetiver oil, 5,428 pounds ($15,264); ylang-ylang oil, 970 pounds ($8,637).

Licenses are not required since July 3 for the sale in Colombia of medicinal and pharmaceutical preparations the name and formula of which have been registered in the official codex. Containers must be labeled to show such registration, and registration is voided by a change in name.

The new British dangerous drugs act, which will become effective September 25, applies in full control to cannabis indica and extract or tincture thereof, benzoylmorphine, dihydrocodeinone, dihydro - oxycodeinone and all preparations containing heroine.

A detailed report on the trade of the United Kingdom in synthetic perfume materials has been published by the Chemical Division of the Bureau of Foreign and Domestic Commerce. The report is by Homer S. Fox, trade commissioner at London, and contains a list of British products in addition to statistical information. Copies may be had at request to the chemical division.

The Societe Alsacienne de Produits Chimiques, La Rochelle, France, has acquired world rights for processes employed in the manufacture of synthetic camphor. The company is now negotiating with some foreign groups for the granting of sublicenses. Expansion of its activities is expected to follow the recent increase in capital from 25,000,000 to 50,000,000 francs.

The United States Bureau of Customs has approved the practice of the appraiser of merchandise at the port of New York relative to classification of certain types of vanity sets, and has directed that hereafter all entries of this particular type of vanity set be considered with its case as an entirety, and the duty assessed accordingly. Some appraisers heretofore had been classifying the sets according to the component materials of chief value, which resulted in a varying duty assessment.

Parcel post packages addressed for delivery in Persia are now subject to the following transit charges, which are in addition to the postage rate of 14 cents a pound or fraction thereof:—Up to 2 pounds, 54 cents; over 2 pounds and up to 7 pounds, 96 cents; over 7 pounds and up to 11 pounds, $1.26. Parcels can not be registered or insured but may be sealed. Two copies of the customs declaration must accompany each parcel. The above has reference to parcels for Persia dispatched by the ordinary route and does not change the transit charges applicable to parcels for Persia for dispatch by the "Desert Motor Service."

Botanical Drugs

Better Demand Followed the Holiday—Undertones Generally Steady—Prices Show a Deal Of Stability on the Spot

An accumulation of mail orders over the holiday period caused a sharp expansion in activities in the market for botanical drugs last week. The fact that many consumers were unable to obtain deliveries from Friday night to Tuesday morning led to active buying for prompt requirements. The result was a market nearer to normal volume and a generally more satisfactory condition of affairs. Prices showed a deal of stability and, in fact, changes were very few.

A feature of the period was the strong market for all kinds of peppers. Scarcity was the rule in whatever market of the world buyers sought supplies. The absence of sufficient stocks was particularly noticeable on spot. Attempts of grinders to cover needed supplies for immediate usage resulted in holders of the meagre spot stock putting prices still higher; it was the second week of successive advances and the market closed strong.

Ergot turned weaker and competition was more prevalent than it had been for some time past. Lower open quotations were in the market and prices were to 32c. Demand was insignificant.

Condurango. — Higher prices continued to come in from the primary market. Spot dealers took a very firm view of the market and while some sold at 14c. per pound, most of them wanted 15c. minimum.

Elm. — Undertones were firm, primary market prices being well maintained and demand showing a tendency toward a broader requirement on the part of manufacturing consumers.

Wild Cherry. — An adequate collection has been reported from the primary market and the prices paid have been equitable and indicative of a stabilized market in which manufacturers may trade.

Beans

Calabar.—Sellers reported prices to be steady despite the rather inert character of consuming request. Stocks were ample.

Vanilla.—Mexican cuts were quoted $2.60 to $2.75 per pound, being 5c. cheaper. Other prices were unchanged. The market had a steady undertone under the influence of a quiet but none the less regular call from manufacturing consumers. Reports from foreign parts failed to show much change in the situation. Mexico reported a satisfactory condition of the 1928-1929 crop now growing, flowering having been suggestive of some gain in the size of the next crop.

Current prices on botanical drugs, formerly printed on pages 6 and 8, are now printed at the end of this market report.

vate information favored the view that a firm order in hand might be filled for something less. Balsam copaiba was in better supply at a lower cost and a reduction in spot prices. Ipecac root from Cartagena eased off slightly under the influence of a smaller request. The decline was slight.

Quince seed from Spain was also in competitive position. Not all sellers reduced prices but enough of them did to ease the market back considerably. Cape remained firm. American saffron was in better supply, though questions of quality were not unrelated to establishment of lower prices. Spanish was also easier, buyers being disposed to bid for supplies.

Seeds were mostly quiet. Mustard promised to be strong as to price for some time to come, due to under production throughout the world. Caraway and canary were slightly lower on the spot as the call was very light locally.

Price Changes

Prices were changed during the past week as follows:—

Advanced	Reduced
Fish berries, ½c. per lb.	Balsams, copaiba, Para, 4c. per lb.
Marjoram, French, 1c. per lb.	South American, 3c. per lb.
Peppers, black, Allepey, 1c. per lb.	Canella alba, 4c. per lb.
Lampong, 1c. per lb.	Canary seed, Morocco, ½c. per lb.
Singapore, 1c. per lb.	Caraway, ½c. per lb.
Tellicherry, 3¼c. per lb.	Ergot, 10c. per lb.
white, Singapore, 1c. per lb.	Echinacea, 1c. per lb.
Pimento, ½c. per lb.	Ipecac, Cartagena, 5c. per lb.
	Jalap, 2c. per lb.
	Poppyseed, ¼c. per lb.
	Quince seed, Spanish, 3c. per lb.
	Saffron, American, 2c. per lb.
	Vanilla, Mexican cuts, 5c. per lb.

Comparative Values

Index numbers compiled from forty typical botanicals on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
119.9	120.8	123.5	125.7

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Balsams

Copaiba.—Prices have been lowered rather sharply, due to a marked increase in the stocks available on the spot. Quotations for Para were 4c. lower at 33c. to 35c. per pound; South American, 3c. lower at 35c. to 37c.

Tolu.—The market was firm but not subject to a very powerful demand for quick deliveries. Prices were well maintained at recent levels.

Barks

Canella Alba.—One quarter cut the spot price to 28c., a reduction of 4c. per pound. The range, according to seller,

Berries

Fish.—Sellers at the former price of 5½c. reported sales of sufficient quantities to eliminate that as a spot quotations on further business. Prices were 6c. to 7c. at the close of the week, ruling as to seller and quantity.

Saw Palmetto. — Plentiful supplies were available in the primary market, but prices offered by buyers have been so low that collection has not been stimulated. It is believed that a fair carryover is in this market.

Flowers

Arnica.—Spot stocks were about exhausted and the market was strictly nominal. Goods to arrive were offered at 65c. per pound. Little demand was current here.

Chamomile. — A small crop has resulted in strong prices abroad. The poor production affected both the Belgian and Hungarian crops. The tendency in prices is upward in all markets. Spot stocks are moderate.

Saffron.—American flowers were 2c. lower at 28c. to 30c. per pound, competition being the decisive factor in sales last week. Spanish was unchanged, but there was some reason to believe that the current quotations could be shaded.

Herbs

Marjoram.—French was 1c. higher at 18c. to 19c. per pound, supplies available out of the short crop abroad being strongly held for future sales. German was firm but unchanged.

Peppermint.—Domestic merchandise was said to show excellent quality this year and prices therefore are considered to be attractive at 13c. to 14c. per pound. Demand has yet to develop.

Thyme. — Inquiry was somewhat more active but in the main the market was a routine affair. Replacement prices were deemed firm and well maintained.

Leaves

Digitalis. — Interest in this article rests mainly in the outlok for replenishment of the spot stocks at prices much more favorable than have been paid abroad. Offerings at this time are said to be rather few in number but the tendency of prices is downward.

Henna. — Substantial quantities of new crop Egyptian have been bought to come forward, probably in October. The prices paid were somewhat above

Valuable information on Imports and Exports of Botanical Drugs is given in port lists beginning on page 5.

TESTED BOTANICALLY — HOPKINS BRAND — TESTED MICROSCOPICALLY

ANALYZED CRUDE DRUGS

Aloes	Henbane Leaves	Rhubarb Root
Asafoetida Gum	Ipecac Root	Senna Leaves
Belladonna Leaves	Juniper Berries	Squills
Buchu Leaves	Karaya Gum	Strophanthus Seed
Cinchona Bark	Kola Nuts	Sundew
Colocynth Pulp	Lavender Flowers	Tonga
Digitalis Leaves	Licorice Root	Tragacanth Gum
Doggrass	Mastic Gum	Uva Ursi Leaves
Ergot	Myrrh Gum	Valerian Root
Eucalyptus Leaves	Orris Root	Wormseed Levant
Fennel Seed	Papain	Yellow Dock Root
Gentian Root	Quince Seed	Zedoary Root

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Agar Agar Cut	Dragon's Blood Powd.	Jalap Root Powd.
Agar Agar Powdered	Extract Witch Hazel	Laurel Leaves
Balsam Fir Canada	Fish Berries	Mineral Oil
Barbadoes Aloes Powd.	Fumigating Pastilles	Olive Oil Green
Barbadoes Tar	Fluid Extract Cascara Sagrada	Olive Oil Italian
Bay Rum Domestic	Gum Benzoin	Olive Oil Spanish
Bay Rum St. Thomas	Gum Benzoin Powd.	Precipitated Chalk Sturgis
Calcined Soot	Gum Euphorbium Powd.	Silex
Cascara Sagrada Powd.	Gum Myrrh Granul.	Skunk Oil
Cassia Fistula	Gum Myrrh Powd.	Socotrine Aloes Powd.
Charcoal Willow	Gum Olibanum	Tamarinds
Cod Liver Oil	Gum Olibanum Powd.	Tincture Green Soap
Colchicum Root Powd.	Jalap Root Ground	Venice Turpentine Artificial
Cuttle Fish Bone		Zinc Oxide Hubbucks

the Marseilles market quotations but the quality is said to be superior to the merchandise obtainable from that point.

Senna.—Reports from London suggest that the higher grades of T. V. senna will be rather scarce this year. Arrivals are slow and the quality of merchandise landed thus far does not suggest a superior stock of the finer grades. High prices are expected to rule there for No. 1. The local market holds light stocks of the higher grades but there is a fair supply of the grinding qualities available at well stabilized and not excessive prices.

Miscellaneous

Colocynth Pulp.—The market was firmer following the decline. Stocks were conservative and not widely spread in this market. Importation of further quantities sure to be passed for consumption was quite questionable.

Ergot.—Considerable competition in this market has resulted in a weakening of prices. Open quotations were $1 to $1.10 per pound but it was thought that a firm order in hand might be filled for less. Nothing was said regarding new crop prospects in Spain.

Grains of Paradise.—Stocks were very small, held in a few hands and strongly priced on the basis of 45c. to 50c. per pound. Inquiry was light.

Roots

Echinacea.—Quotations were reduced 1c. further, making the market 25c. to 27c. per pound as to seller and quantity. A firmer feeling developed at the decline with inquiry showing some gain locally.

Ipecac.—Slightly more competition was reported in this market and some purchases of Cartagena root were made at $2.70 to $2.75 per pound and possibly for something less than that. Powder remained very firm at recently prevailing prices.

Jalap.—Sales were made at 18c. per pound, or at 2c. less than the average open price in this market during recent periods. The range was to 20c. Primary market conditions were reported to be still on the firm side. Powder was inactive.

Senega.—The market was firm and without change. Primary market conditions have changed not at all in favor of buyers for export and on the whole the situation seemed to be opposed to the development of lower levels in the nearby future. Trade was light last week.

Seeds

Anise.—The Spanish market remained strong at the recent advance for shipment parcels. Spot quotations were well maintained under fair sized demand for quick deliveries. Star was also free from competition in this market.

Canary.—Morocco seed was down 1/8c. per pound, making the market 5c. to 5½c. with demand very light. Other kinds were inactive and without change.

Celery.—Cables from France failed to make firm offerings of substantial quantities in most instances. Spot sellers found business bad but held prices firm.

Mustard.—The future of this article was said to be committed to an era of comparatively high prices due to the fact that world crops have turned out to be short and the unsold balance of other crops is very small. Prices had an upward tendency last week.

Poppy.—A decrease in the spot call caused price shading to the extent of ¼c. The market was down to 8½c. to 9c. per pound as to quantity and the tendency was to accept bids.

Quince.—Spanish seed was lowered again, the reduction being 3c. per pound and sales confirming the market at 55c. per pound. The range was to 58c. Cape seed was available in moderate quantities at 95c.

Spices

Clove.—Primary market cables were free from fluctuations in prices. Purchases were made at recently prevailing quotations and on the whole the market seemed to be firm, or at least steady. Little was doing locally.

Ginger.—All kinds of this article were in fair request at full prices; importers and dealers were not the least inclined to shade open quotations. Replacements were uniformly well maintained at the source of supply.

Peppers.—Black and white peppers continued to be advanced. Alleppy, Lampong, and Singapore were 1c. higher. Heavy demand put the Tellicherry price 3¼c. higher. White Singapore sold at a rise of 1c. Quotations were as follows:—Black, Alleppy, 35c. to 36c. per pound; Lampong, 34c. to 35c.; Singapore, 34c. to 35c.; Tellicherry, 37¼c.; White, Singapore, 55c. to 56c. Scarcity of stocks throughout the world but particularly in this country caused the movement upward.

Pimento.—Sales were made at 21c. to 22c. per pound, being a further rise of ½c. in a market containing good request and a very moderate stock wherewith to supply the same.

Current Prices

(For late price changes, see page 2)

Balsams

Copaiba, Para, cans	lb.	.33 @	.35
S.A., U.S.A., cans	lb.	.35 @	.37
Fir, Canada, cans	gal.	12.00 @	12.25
Oregon, bbls	gal.	1.00 @	1.30
Peru, drums	lb.	1.72½@	1.75
Tolu, cans	lb.	1.00 @	1.10

Barks

Angostura, bales	lb.	.18 @	.19
Barberry root, bales	lb.	.20 @	.21
tree, bales	lb.	.11½@	.12
Bayberry, bags	lb.	.12 @	.13
Black haw root, bales	lb.	.26 @	.27
tree, bales	lb.	.14½@	.15
Buckthorn, true, bales	lb.	.05 @	.06
Butternut, bales	lb.	.08 @	.09
Canella alba, bales	lb.	.28 @	.32
Cascara sagrada, new crop, bales	lb.	.13 @	.14
one year old, bales	lb.	.14 @	.15
two years old, bales	lb.	.15 @	.16
four years old, bales	lb.	.17 @	.18
Cinchona, quills, short, bags	lb.	.58 @	.60
long, cases	lb.	.65 @	.75
broken, bags	lb.	.20 @	.28
chips, bags	lb.	.20 @	.28
Cocillana, bags	lb.	.33 @	.34
Condurango, bags	lb.	.14 @	.15
Cottonroot, bales	lb.	.13 @	.14
Cramp, genuine, bales	lb.	.35 @	.50
so-called, bales	lb.	.07 @	.08
Dogwood, domestic, bales	lb.	.06 @	.07
Jamaica, bales	lb.	.09 @	.10
Elm, grinding, bales	lb.	.13 @	.14
powdered, barrels, boxes	lb.	.19 @	.20
select, bundles, cases	lb.	.24 @	.25
Fringetree, bales	lb.	.22 @	.23
Lemon peel, bales	lb.	.09½@	.10
Orange peel, bitter, Curacao, bales	lb.	.10½@	.11
sweet, bales	lb.	.08 @	.09
Pomegranate root, bags	lb.	No stocks	
tree, bags	lb.	.15 @	.16
Prickly ash, bales	lb.	.15 @	.16
Sassafras, ordinary, bales	lb.	.14 @	.15
select, bales	lb.	.23 @	.28
Simarubra, bales	lb.	.18 @	.20
Soap, bales	lb.	.13 @	.14
crushed, bales, barrels	lb.	.15 @	.16
cut, bales, barrels	lb.	.15½@	.16
powdered, barrels	lb.	.19 @	.20
Tonga, bales	lb.	.42 @	.45
Wahoo root, bales	lb.	.52 @	.53
tree, bales	lb.	.26 @	.28
White pine, bales	lb.	.07 @	.08
Wild cherry, thick, bales	lb.	.05 @	.06
rossed, bales	lb.	.09 @	.10
thin, bales	lb.	.07½@	.08
rossed, green, bales	lb.	.11½@	.13

Beans

Calabar, bags	lb.	.23 @	.25
St. Ignatius, bags	lb.	.16 @	.17
Tonka Angostura, casks	lb.	1.65 @	1.85
Vanilla, Bourbon, tins	lb.	1.75 @	2.25
Mexican, whole, tins	lb.	3.50 @	4.25
cuts, tins	lb.	2.60 @	2.75
South American, tins	lb.	2.50 @	2.75

Berries

Buckthorn, bags	lb.	.45 @	.47
Cubeb, XX, bags	lb.	.37 @	.38
powdered, cases, bags	lb.	.42 @	.44
Fish (coculus indicus), bags	lb.	.06 @	.07
Juniper, bags	lb.	.05½@	.06
Laurel, bales	lb.	.08 @	.09
Prickly ash, bales	lb.	.18 @	.19
Raspberry, dried, barrels	lb.	.55 @	.57
Saw Palmetto, bales	lb.	.10 @	.11
Sumac, bags	lb.	.07 @	.08

Flowers

Arnica, bales	lb.	1.10	Nom.
Borage, bales	lb.	.15 @	.16
Calendula, bales	lb.	No stocks	
Chamomile, Hungarian, genuine, cases	lb.	.18 @	.20
Roman, bales	lb.	.18 @	.20
Clover tops, bales	lb.	.10 @	.15
Elder, bales	lb.	.18 @	.25
Insect (pyrethrum), powdered, barrels, kegs	lb.	.38 @	.44
with stems, barrels, kegs	lb.	.27 @	.30
Lavender, ordinary, bales	lb.	.30 @	.35
Select, bales	lb.	.40 @	.45
Linden, with leaves, bales	lb.	.32 @	.35
without leaves, bales	lb.	.36 @	.35
Malva, black, bales	lb.	.45 @	.50
blue, bales	lb.	.45 @	.50
Mullein, cans	lb.	2.00 @	2.10
Orange, cases	lb.	.25 @	.30
Poppy, red, bales	lb.	.50 @	.60
Rose, red, bales	lb.	1.65 @	1.75
Rosemary, bales	lb.	.25 @	.30
Saffron, American, bales	lb.	.28 @	.30
Spanish, tins	lb.	11.50 @	12.00

Herbs

Boneset, bales	lb.	.09½@	.10
Broomtops, bales	lb.	.10 @	.11
Cannabis, domestic, U.S.P., bales	lb.	.22 @	.30
Ephedra, vulgaris, bales	lb.	.14 @	.15
Euphorbia pilulifera, bales	lb.	.07½@	.08
Grindelia robusta, bales	lb.	.09 @	.10
Horehound, bales	lb.	.07½@	.08
Lobelia, bales	lb.	.14½@	.15½
Marjoram, French, No. 1, bls.	lb.	.18 @	.19
German, bales	lb.	.15 @	.15½
Passion flower, bales	lb.	.06½@	.09
Pennyroyal, bales	lb.	.06 @	.08
Peppermint, bales	lb.	.13 @	.14
Pulsatilla, bales	lb.	.12 @	.13
Queen of the Meadow, bags	lb.	.07 @	.08
Rue, bales	lb.	.17½@	.18
Savory, bales	lb.	.07½@	.08
Skullcap, Eastern, bales	lb.	.38 @	.40
Western, bales	lb.	.20 @	.22
Tansy, bales	lb.	.10½@	.11
Thyme, French, bales	lb.	.07¼@	.07½
Spanish, bales	lb.	.05¾	Nom.
Wormwood, bales	lb.	.09 @	.10

Leaves

Aconite, bales	lb.	.11 @	.12
Belladonna, bales	lb.	.18 @	.22
Boneset, bales	lb.	.11 @	.12
Buchu, bales	lb.	.40 @	.41
Catnep, bales	lb.	.18 @	.20
Coltsfoot, bales	lb.	.09 @	.10
Conium, bales	lb.	.12 @	.13
Damiana, bales	lb.	.16 @	.17
Deer tongue, bales	lb.	.12 @	.13
Digitalis, bales	lb.	.45 @	.50
Eucalyptus, bales	lb.	.07 @	.08
Henbane, bales	lb.	.18 @	.19
Henna, bales	lb.	.12 @	.13
powdered, barrels, boxes	lb.	.15 @	.16
Jaborandi, bales	lb.	.10 @	.11
Laurel, Italian, bales	lb.	.04½	Nom.
Greek, bales	lb.	.05 @	.05½
Liverwort, bales	lb.	.20 @	.21
Malva, bales	lb.	.14 @	.15
Matico, bales	lb.	.30 @	.31
Mullein, bales	lb.	.07½@	.09
Patchouli, bales	lb.	.23 @	.24
Peppermint, bales	lb.	.25 @	.28
Pichi, bags	lb.	.14 @	.15
Prince's pine, bales	lb.	.15 @	.16
Rosemary, bales	lb.	.05 @	.06
Sage, Greek, bales	lb.	.03½	Nom.
Dalmatian, bales	lb.	.05½@	.06
Senna, Alex., whole, bales, cs.	lb.	.20 @	.21
half leaf, bales	lb.	.13 @	.14
siftings, bales	lb.	.10 @	.11½
Tinnevelly, bales	lb.	.07½@	.15
powdered, barrels, boxes	lb.	.09½@	.10
pods, bales	lb.	.08½@	.10
Spearmint, bales	lb.	.23 @	.25
Squaw vine, bales	lb.	.20 @	.21
Stramonium, bales	lb.	.18 @	.19
Tansy, bales	lb.	.11 @	.12
Uva ursi, bales	lb.	.06 @	.06½
Witch hazel, bales	lb.	.07 @	.09
Yerba santa, bales	lb.	.09½@	.10

Miscellaneous

Agaric, white, bales	lb.	.58 @	.60
Areca nuts, bags	lb.	.10 @	.11
Balm of Gilead buds, bags	lb.	.28 @	.37
Cassia fistula, baskets	lb.	.12 @	.15
Colocynth, pulp, bales	lb.	.50 @	.55
Corn silk, bales	lb.	.05 @	.06
Dragon's blood, mass, cases	lb.	.65 @	.70
reeds, thin, cases	lb.	.90 @	.92
Ergot, spot, bags	lb.	1.00 @	1.10
Grains of paradise, bags	lb.	.45 @	.50
Guarana, cases	lb.	3.00 @	3.10
Hops, bales	lb.	.25 @	.26
Iceland moss, bales	lb.	.10 @	.12
Irish moss, ordinary, bales	lb.	.07 @	.08
bleached, bales	lb.	.13 @	.14
Kamala, tins	lb.	.95 @	1.05
Kola nuts, bags	lb.	.12 @	.13
Lupulin, N.F., tins	lb.	1.65 @	1.75
Lycopodium, cases	lb.	.68 @	.70
Manna flakes, large, cases	lb.	.65 @	.70
small, cases	lb.	.48 @	.50
Nux vomica, bales	lb.	.05 @	.05½
powdered, barrels, boxes	lb.	.07½@	.08
Papain, powdered, cases	lb.	3.50 @	3.75
Poppy heads, barrels	lb.	.55 @	.60
Quassia chips, bales	lb.	.06 @	.08
St. John's bread, bales	lb.	.05½@	.06
Tamarind, barrels	lb.	.05 @	.05½
kegs	keg	3.75 @	4.00

Roots

Aconite, U.S.P., bales	lb.	.20 @	.23
Aletris, bags	lb.	.36 @	.38
Alkanet, bales	lb.	.12 @	.13
Althea, cut, cases	lb.	.33 @	.35
Angelica, American, bales	lb.	.20 @	.22
Arnica, bales	lb.	.35 @	.36
Arrowroot, St. Vincent, powd., barrels	lb.	.09 @	.10
Belladonna, bales	lb.	.20 @	.22
Berberis aquifolium, bales	lb.	.11 @	.12
Beth, bales	lb.	.18 @	.19
Black Indian hemp, bales	lb.	.18 @	.20
Blood, bales	lb.	.17½@	.18
Blueflag, bales	lb.	.17 @	.18
Bryonia, bales	lb.	.11 @	.12
Burdock, bales	lb.	.10 @	.11
Calamus, bags	lb.	.06 @	.07
bleached, cases	lb.	.35 @	.42
Cohosh, black, bales	lb.	.07½@	.08
blue, bales	lb.	.10 @	.12
Colombo, bales	lb.	.10 @	.11
Cranesbill, bales	lb.	.08½@	.10
Culvers, bales	lb.	.18 @	.20
Dandelion, bales	lb.	.15 @	.17½
Doggrass, cut, bales	lb.	.11 @	.12
Echinacea, bales	lb.	.25 @	.27
Elecampane, bales	lb.	.08 @	.09
Galangal, bales	lb.	.12 @	.13
Gelsemium, bales	lb.	.10 @	.10½
Gentian, bales	lb.	.09½@	.10
ground, barrels, boxes	lb.	.14 @	.15
powdered, barrels, boxes	lb.	.15 @	.16
Ginger (see Spices, page 8).			
Ginseng, cultivated, cases	lb.	8.00 @	12.00
wild, Southern, cases	lb.	8.50 @	10.00
fibers, cases	lb.	3.75 @	4.00
Golden seal, bales	lb.	3.90 @	4.00
powdered, boxes	lb.	4.60 @	4.70
Hellebore, white, pwd., bbls	lb.	.11 @	.12
Hydrangea, bales	lb.	.08 @	.09
Ipecac, Cartagena, bags	lb.	2.70 @	2.75
powdered, boxes	lb.	3.15 @	3.20
Rio, bags	lb.	2.80 @	2.85
powdered, boxes	lb.	3.20 @	3.25
Jalap, bales	lb.	.18 @	.20
powdered, barrels, boxes	lb.	.22 @	.24
Kava kava, bales	lb.	.14½@	.15
Lady slipper, bales	lb.	.80 @	1.10
Licorice, bales	lb.	.05½@	.08¼
powdered, barrels, boxes	lb.	.08 @	.09
selected, cases	lb.	.12½@	.18
Lovage, American, bales	lb.	.35 @	.40
foreign, bales	lb.	.20 @	.22
Manaca, bales	lb.	.17 @	.18
Mandrake, bales	lb.	.13 @	.14
Musk, bales	lb.	.12 @	.13
Orris, Florentine, bags	lb.	.13 @	.13½
fingers, cases	lb.	.90 @	.95
powdered, barrels, boxes	lb.	.15 @	.16
Verona, bales	lb.	.11½@	.12
powdered, barrels, boxes	lb.	.13½@	.14
Pareira brava, bales	lb.	.11 @	.12
Pellitory, bales	lb.	.17 @	.18
Pink, true, bales	lb.	.60 @	.62
Pleurisy, bales	lb.	.20 @	.23
Poke, bales	lb.	.08 @	.09
Queen of the Meadow, bags	lb.	.07 @	.08
Rhatany, bags	lb.	.10½@	.11½
Rhubarb, high dried, cases	lb.	.39 @	.40
powdered, barrels, kegs	lb.	.44 @	.45
Sarsaparilla, American, bales	lb.	.22 @	.25
Honduras, bales	lb.	.53 @	.54
Mexican, bales	lb.	.20 @	.21
Scammony, bags	lb.	.08½@	.09
Senega, bales	lb.	1.20 @	1.25
Serpentaria, bales	lb.	.70 @	.72
Skunk cabbage, bales	lb.	.16 @	.17
Snake, Canada, bales	lb.	.25 @	.27
Spikenard, bales	lb.	.20 @	.22
Squill, bales	lb.	.16 @	.20
powdered, barrels, boxes, bottles	lb.	.23 @	.23
Stillingia, bales	lb.	.10 @	.11
Stone, bales	lb.	.08 @	.09
Tonga, bales	lb.	.42 @	.45
Turmeric, Aleppy, bags	lb.	.09¼@	.09¾
Bombay, bags	lb.	.08½@	.08¾
Madras, bags	lb.	.08½@	.09
Unicorn, false (helonias), bales,	lb.	.68 @	.70
true (aletris), bags	lb.	.36 @	.38
Valerian, U.S.P., bales	lb.	.14 @	.15
Wild indigo, bags	lb.	.13 @	.14
Yellow dock, bales	lb.	.09 @	.10
Yellow (xanthoriza), bales	lb.	.13 @	.14

Seeds

Anise, Spanish, bags	lb.	.16 @	.17
star, bags	lb.	.22½@	.23
Canary, Argentine, bags	lb.	.04¾@	.05¼
Morocco, bags	lb.	.05 @	.05½
Spanish, bags	lb.	.06	Nom.
Caraway, Dutch, bags	lb.	.09 @	.09½
Cardamom, bleached, cases	lb.	1.20 @	1.75
decorticated, cases	lb.	1.40 @	1.45
green, bags	lb.	1.20 @	1.30
Celery, bags	lb.	.20 @	.20¼
Colchicum, bags	lb.	.35 @	.37
Coriander, Morocco, bags	lb.	.05¾@	.06
bleached, bags	lb.	.11½@	.12
Russian, bags	lb.	.08 @	.08¼
Cumin, Malta, bags	lb.	.13 @	.13½
Morocco, bags	lb.	.13 @	.13½
Dill, bags	lb.	.07¼@	.07¾
cleaned, bags	lb.	.07¾@	.08¼
Fennel, French, bags	lb.	.20 @	.22
German, bags	lb.	.25 @	.26
Fenugreek, bags	lb.	.04½@	.05
Flea, black, bags	lb.	.18 @	.19
brown, bags	lb.	.12 @	.12½
Hemp, Manchuria, bags	lb.	.04 @	.05
Larkspur, bags	lb.	.40 @	.45
Lobelia, bags	lb.	.45 @	.50
Millet, bags	lb.	.04½@	.05
hulled, bags	lb.	.06¾@	.07½
Mustard, Bari, brown, bags	lb.	.10	Nom.
California, brown, bags	lb.	.10 @	.10¼
Chinese, yellow, bags	lb.	.07¼@	.07¾
Dutch, yellow, bags	lb.	.07¼@	.07¾
English, yellow, bags	lb.	.08 @	.08½
Roumanian, yellow, bags	lb.	.06¼	Nom.
Sicilian, brown, bags	lb.	.10¾@	.10¾
Poppy, Dutch, bags	lb.	.08½@	.09
Indian, blue, bags	lb.	No stocks	
Pumpkin, bags	lb.	.10 @	.20
Quince, bags	lb.	.55 @	.95
Rape, Dutch, bags	lb.	.06¾@	.07¼
German, bags	lb.	.06¾@	.07¼
South American, bags	lb.	No stocks	
Sabadilla, powdered, barrels	lb.	.35 @	.36
Stavesacre, bags	lb.	.16 @	.17
Stramonium, bags	lb.	.07½@	.08
Strophanthus, Kombe, bags	lb.	2.00 @	2.25
Sunflower, domestic, bags	lb.	.08 @	.08½
South American, bags	lb.	.06¾@	.07¼
Worm, American, bags	lb.	.14 @	.15
Levant, bags	lb.	4.40 @	4.50

Spices

Cassia, Batavia, No. 1, bales	lb.	.13¾@	.14
No. 3, bales	lb.	.10 @	.10½
shortstick, bales	lb.	.11 @	.11¾
buds, cases	lb.	.20 @	.22
China, selected, cases	lb.	.09½@	.10
broken, bags	lb.	.07¾@	.08
extra, bags	lb.	.08 @	.08¾
Saigon, cases	lb.	.24½@	.25
Cinnamon, Ceylon 1, bales	lb.	.60 @	.61
No. 2, bales	lb.	.56 @	.57
Clove, Zanzibar, bales	lb.	.26½@	.27
Ginger, African, No. 1, bags	lb.	.14½@	.14¾
Cochin, abc, bags	lb.	.16½@	.17
lemon, bags	lb.	.16½@	.17
Jamaica, fancy, bold, bags	lb.	.32 @	.33
medium, bold, bags	lb.	.24 @	.24¼
grinding, dark, bags	lb.	.21 @	.22
medium, bright, bags	lb.	.22 @	.22¼
Japanese, bags	lb.	.17 @	.17¼
Mace, Banda, cases	lb.	.97 @	.99
Batavia, No. 2, cases	lb.	.60 @	.61
Penang, No. 2, cases	lb.	.90 @	.92
Nutmegs, 80s, bags, cases	lb.	.45 @	.46
110s, bags, cases	lb.	.34 @	.35
grinding, bags, cases	lb.	.26 @	.27
Paprika, extra fancy, bags	lb.	.25½@	.26
fair, bags	lb.	.22 @	.23
fancy, bags	lb.	.24½@	.25
medium, bags	lb.	.24 @	.25
Pepper, black, Alleppy, bags	lb.	.35 @	.36
Lampong, bags	lb.	.34 @	.35
Singapore, bags	lb.	.34 @	.35
Tellicherry, bags	lb.	.37¼@	—
red, chillies, Japanese, No. 1, bags	lb.	.24 @	.24¼
Mombassa, bags	lb.	.64 @	.65
white, Muntok, bags	lb.	.55 @	.56
Singapore, bags	lb.	.55 @	.56
Pimento, bags	lb.	.21 @	.22

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ESSENTIAL OILS

Peppermint Offered More Freely by Midwestern Producers—Bourbon Geranium on Spot Prices Higher—Clove Cut

Price movements in the market for essential oils last week were predominently downward. The local trade lacked volume in quantities sufficient to remove the market from its recent position of dullness and the result was a buyers' market in almost every respect. A feature of the market was the reversal of price trend in geranium oil, a rise being recorded following numerous declines. Also, peppermint oil was held for higher rates although the situation in the middlewest seemed to have changed somewhat, undertones becoming easier. Orange oil was cheaper; in fact, all citrous oils were easier due to absence of demand. The list of price changes for the week contained few new developments.

After a series of price declines, Bourbon geranium reversed itself pricewise last week and by the close of the period sold for substantially higher rates. This was in part due to a strengthening abroad and in part to a betterment in the local situation through the absorption of the more cheaply priced lots.

Current prices on essential oils, formerly printed on page 8, are now printed at the end of this market report.

Cables from Italy revealed little change in prices for bergamot, lemon or orange oil. The spot market was in marked contrast. Orange was offered rather liberally at severely lower prices in some quarters without bringing about any betterment in demand locally. All citrous oils have been in extremely light request for weeks and improvement does not seem to be forecast by the present situation.

Western factors in the peppermint oil market offered more freely and accepted prices somewhat lower than had been quoted recently. It was felt that the larger buyers in the primary market had covered and that a decrease in their takings had at last brought the beginning of the break expected here for some time past. The rise in spot quotations was due mainly to the light stocks here.

Clove and cassia resumed their downward trend as the result of continued competition for business in a rather slow market. Cubeb was more reasonably priced by reason of the low cost of production based on the present prices for raw material. Lavender was cheaper, confirming the reports of lower prices in France where the crop this year was of excellent size and quality. Ceylon citronella was down slightly and the article from Java was easier on good supplies being available on spot.

Price Changes

Prices were changed during the past week as follows:

Advanced	Reduced
Apricot kernel, 2c. per lb.	Anise, USP, 3c. per lb.
Geranium, Bourbon, 35c. per lb.	Cananga, native, 5c. per lb.
Peppermint, natural, 10c. per lb.	Cassia, redistilled, 10c. per lb.
redistilled, 15c. per lb.	Citronella, Ceylon, 1c. per lb.
	Clove, 5c. per lb.
	Cubeb, 30c. per lb.
	Lavender, 15c. per lb.
	Lime, expressed, $1 per lb.
	Orange, Messina, 75c. per lb.
	West Indian, $1 per lb.
	Wormseed, 15c. per lb.

Comparative Values

Index numbers compiled from twenty typical essential oils on the basis of a normal of 100 for August 1, 1914, compare as follows:—

Last week.	Prev. week.	Last month.	Last year.
165.9	167.6	168.8	125

Current prices are given at the end of this report. Price changes made Saturday up to noon and other last-minute market developments are reported on page 2.

Apricot Kernel.—A firmer market accompanied better demand for prompt deliveries. Local sellers abandoned recent minimum prices and confirmed sales on the basis of 44c. to 45c. per pound. Stocks were moderate.

Anise.—Competition came out under a drive for several substantial orders. Quotations were established at 56c. to 59c. per pound, according to seller.

Bergamot.—The market lacked orders for prompt delivery and later arrival. The market was stagnant here and certainly not active abroad, though prices at both points were without change.

Bois de Rose.—The primary market cables declared for strength of replacement prices and indicated that a fair movement of oil was going to the European markets. Spot prices reflected firmness and demand continued fair in volume, if not expansive.

Cananga.—Native was 5c. lower at $3.20 to $3.45 per pound, this development reflecting the current lack of interest on the part of most buyers.

Cassia.—Weakness again developed and the recent downward movement in prices was resumed. Quotations ended the week 10c. lower than in the previous period, the market being dull at $2.15 to $2.25 per pound.

Cedarwood.—A sturdy maintenance of price featured the market views of the principal producers of this article. The export market was fairly lively, with inquiries numerous. Stocks in the primary market were not excessive.

Citronella.—Celyon oil in drums could be bought for 1c. less than prevously, sales being confirmed at 41c. to 43c. per pound. The market for Java oil was also somewhat easier, due to the presence of rather ample stocks and a none too active request.

Clove.—Though the spice market has changed but little, competition for business in oils has continued to develop and resulted in reductions of spot quotations. The market was 5c. lower at $1.75 to $1.80 per pound.

Coriander.—Activity has subsided smartly, leaving prices somewhat easy in undertone and lacking of support sufficient to eliminate competitive tendencies among local dealers.

Cubeb.—The low prices at which raw material may be bought has made possible a rather marked decline in prices at which dealers will sell oil. The market was down 30c. to the basis of $2.80 to $3 per pound.

Erigeron.—Lack of demand has served to make holders of carryover oil rather anxious to reduce stocks before the middle-western producers begin to offer new crop production, which will be shortly.

Eucalyptus.—Prices for replacement material were very firm in Australia at the beginning of the season when the larger manufacturing consumers in this country resume major operations against the winter months of better demand for manufactured products. Spot quotations were also very firm last week.

Geranium.—A turnabout in price trend was noted when sales of Bourbon oil were made at $4.35 per pound and all lower quotations were eliminated. No substantial change has been noted in the foreign situation, but the call here was somewhat better. Other kinds were without change as to price.

Lavender.—The plentiful production in Europe and the rather marked reductions in prices named by shippers of oil in foreign parts resulted last week in a 15c. decline in spot prices. The market was $2.60 to $3 per pound.

Lemon.—The market was inert on spot and without important movement in Italy. Manufacturing consumers seemed to have withdrawn from the market, save as jobbing requirements developed. Local dealers seemed to be fairly well stocked with merchandise and hence their interest in offerings made to-arrive or out of spot stocks held by importers was not very active. Prices were unchanged, but they were very easy here.

Lime.—Expressed was without any fundamental change, but the spot price was somewhat lower at $11 to $12 per pound. Distilled remained very steady at $6 to $6.25 per pound. Demand was negligible.

Orange.—The almost total lack of demand in this market caused a high desire to sell on the part of holders of rather large quantities of this material. Quotations for Messina oil were 75c. lower at $7 to $9.50 per pound as to holder. West Indian was down $1 to the basis of $5.75 to $6. At that, the sturdy character of the primary market seemed to counter strongly against the reduction of prices here. Of course, all factors were more concerned about prices to be paid for new

Valuable information on Imports and Exports of Essential Oils is given in port lists beginning on page 5.

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ESTABLISHED 1895

crop material than they were what might be obtained on the spot.

Peppermint.—A slight change has come in the middle western markets. More disposition to offer has been noted and dealers there have shown a disposition to reduce prices. How permanent this development may be is a question, but some felt that the major part of buying on the part of western factors has been effected and that the trade might expect an easier market in the not far distant future. In the meantime, spot prices were higher, reflecting moderate stocks here. Quotations were:—Natural, $3.20 to $3.30 per pound; redistilled, $3.45 to $3.50.

Petitgrain.—Cables emphasized the gain in strength at the primary source of supply. Spot prices were without change, the lack of sustaining demand being evident.

Rose.—The market was very firm at the recent advances. Bulgarian views as to values were free from weakness last week and some here expected to find furthr advances in the not far distant future.

Spearmint.—While slightly more disposition to offer was noted in the primary market, the prices wanted by middle western holders were no lower and they were free from weakness, actual or potential. Spot supplies were moderate.

Tansy.—Local dealers were awaiting an opportunity to buy liberally in the primary market at prices deemed more attractive than the first quotations put out by the producers. Demand here was negligible.

Wormseed.—Spot deliveries were obtainable at $2.30 per pound, or 15c. less than had been quoted recently. The range was to $2.50 as to quantity. The primary market also lacked important orders, a fact which made weakness locally a feature at all times during the period under review.

Current Prices

(For late price changes, see page 2)

Essential Oils

Almond, bitter, artificial (see benzaldehyde, Coaltar Products).		
natural, bottles	lb. 2.75	@ 3.00
SPA, bottles	lb. 2.90	@ 3.00
sweet, true (expressed) cases	lb. .67½	@ .70
Apricot, kernel, drums	lb. .44	@ .45
Amyris, balsamifera L (so-called "W. I. sandalwood"), tins.	lb. 2.20	@ 2.45
Angelica root, bottles	lb. 18.00	@19.00
Anise, lead free, U.S.P., tins	lb. .56	@ .59
Bay, West Indian, tins	lb. 1.75	@ 2.00
Bergamot, artificial, cans	lb. 2.00	@ 3.25
natural Messina, coppers	lb. 5.00	@ 6.25
Betula (see oil, sweet birch).		
Birch tar, crude, tins	lb. .11	@ .14
rectified, tins	lb. .40	@ .43
Bois de rose, Brazilian, tins	lb. 1.75	@ 2.00
Cayenne, tins	lb. 2.50	@ 2.75
Cade, U.S.P., tins	lb. .25	@ .26
Cajeput technical, drums	lb. .70	@ .75
U.S.P., 1X, tins	lb. .75	@ .77
U.S.P., X, tins	lb. 1.15	@ 1.30
Calamus, tins	lb. 3.25	@ 3.50
Camphor, sassafrassy, drums	lb. .15½	@ —
white, drums	lb. .10½	@ .11
Cananga, native, tins	lb. 3.20	@ 3.45
rectified, tins	lb. 3.65	@ 3.85
Capsicum (oleoresin), U.S.P., VIII. cans	lb. 3.25	@ 3.50
Caraway, U.S.P., tins	lb. 1.75	@ 1.85
Cardamom seed, bottles	lb. 26.00	@28.00
Carvol, bottles	lb. 3.75	@ 4.00
Cassia, redistilled, U.S.P., cans.	lb. 2.15	@ 2.25
Cedarleaf, tins	lb. 1.00	@ 1.10
Cedarwood, drums, tins	lb. .26	@ .28
Celery seed, bottles	lb. 7.50	@ 7.75
Cinnamon, Ceylon, bottles	lb. 10.00	@10.50
Citronella, Ceylon, cans	lb. .43	@ .45
drums	lb. .41	@ .43
Java, drums	lb. .48	@ .49
Clove, U.S.P., cans	lb. 1.75	@ 1.80
Coriander seed, bottles	lb. 12.50	@12.75
Croton, U.S.P., tins	lb. .85	@ .95
Cubeb, U.S.P., tins	lb. 2.80	@ 3.00
Cumin, bottles	lb. 7.00	@ 7.50
Dill, bottles	lb. 3.75	@ 5.75
Erigeron, tins	lb. 1.85	@ 2.00
Eucalyptus, Australian, cases	lb. .58	@ .60
drums	lb. .57	@ .58
Fennel seed, sweet, tins	lb. .80	@ .85
Gaultheria (see oil, wintergreen leaf).		
Geranium, Algerian, rose, tins	lb. 3.40	@ 3.75
Bourbon, tins	lb. 4.35	@ 4.50
Turkish, tins	lb. 3.00	@ 3.25
Ginger, distilled, bottles	lb. 5.50	@ 6.00
Hemlock, tins	lb. .95	@ 1.00
Juniper berries, terpeneless, tins.	lb. 14.00	@16.00
U.S.P., tins	lb. 2.40	@ 3.00
wood, tech., not U.S.P., tins	lb. .50	@ .75
Lavender flowers, French, U.S.P., tins	lb. 2.60	@ 3.00
garden, tins	lb. .40	@ .45
spike, French, tech., tins	lb. 1.00	@ 1.10
Spanish, tech., tins	lb. .90	@ 1.10
Lemon, American, tins	lb. 4.15	@ 4.20
Messina, copper, tins	lb. 3.85	@ 4.25
Lemongrass, native, tins	lb. .90	@ .95
Lime, distilled, tins	lb. 6.00	@ 6.25
expressed, tins	lb. 11.00	@12.00
Linaloe wood, cases	lb. 2.35	@ 2.40
Mace, distilled, tins	lb. 1.65	@ 1.75
Mustard, artificial, U.S.P., bottles	lb. 1.90	@ 2.00
natural, U.S.P., bottles	lb. 9.00	@10.00
Neroli, bigarde, bottles	lb. 75.00	@100.00
petale, bottles	lb. 85.00	@115.00
Nutmeg, U.S.P., tins	lb. 1.65	@ 1.75
Orange, sweet, distilled, tins	lb. 6.50	@ 6.75
expressed, American, tins	lb. 7.00	@ 7.50
Messina, U.S.P., coppers	lb. 7.00	@ 9.50
West Indian, tins	lb. 5.75	@ 6.00
Origanum, commercial tins	lb. .25	@ .50
Palmarosa, tins	lb. 3.00	@ 3.25
Patchouli, bottles	lb. 6.25	@ 6.75
Pennyroyal, American, tins	lb. 1.85	@ 2.00
imported, tins	lb. 1.20	@ 1.25
Peppermint, natural, cases	lb. 3.20	@ 3.30
redistilled, U.S.P., tins	lb. 3.45	@ 3.50
Petitgrain, Paraguay, tins	lb. 1.75	@ 1.85
Pimento berries, tins	lb. 2.65	@ 4.00
Pine needle, Siberian, cans	lb. .70	@ .80
Rose, artificial, bottles	oz. 2.00	@ 3.00
natural, coppers	oz. 12.50	@15.00
Rosemary, flowers, technical, tins	lb. .32½	@ .35
U.S.P., tins	lb. .45	@ .50
Safrol (see Perfume Materials, page 8).		
Sandalwood, E I., U.S.P., tins	lb. 7.00	@ 7.10
Sassafras, artificial, drums	lb. .25	@ —
natural, tins	lb. .80	@ 1.15
Savin, tins	lb. 1.65	@ 1.75
Spearmint, U.S.P., cases	lb. 4.35	@ 4.50
Spruce, tins	lb. .95	@ 1.00
Sweet birch, Northern, tins	lb. 2.25	@ 2.75
Southern, tins	lb. 1.70	@ 1.80
Tansy, tins	lb. 4.15	@ 4.25
Terpineol (see below).		
Thyme, red, tins	lb. .70	@ .80
white, tins	lb. .85	@ .90
Vetiver, Bourbon, bottles	lb. 6.00	@ 6.75
Wintergreen leaf, Northern, tins.	lb. 7.00	@ 8.50
Southern, tins	lb. 3.50	@ 3.75
sweet birch (see oil, sweet birch).		
synthetic (see methyl salicylate, Drugs and Fine Chemicals).		
Wormseed, tins	lb. 2.30	@ 2.50
Wormwood, tins	lb. 16.00	@18.00
Ylang ylang, Bourbon, bottles.	lb. 10.00	@13.00
Manila, bottles	lb. 26.00	@36.00

Perfume Materials

Acetophenone, bottles	lb. 3.00	@ 4.00
Amyl butyrate, bottles	lb. 1.60	@ 3.00
salicylate, cans	lb. 1.15	@ 2.00
Anethol, bottles	lb. 1.20	@ 1.50
Anisic aldehyde, C.P. (liquid aubepine), bottles	lb. 3.25	@ 3.75
Benzaldehyde, U.S.P. (see Coaltar Products).		
Benzyl acetate, F.F.C., bottles.	lb. 1.05	@ 1.35
alcohol, A.M.A., cans	lb. 1.00	@ 2.25
Benzyl benzoate, A.M.A., F.F.C., tins	lb 1.20	@ 1.40
formate, cans	lb. 3.15	@ 4.00
Benzylidin acetone, bottles	lb. 3.25	@ 3.75
Borneol, bottles	lb. 2.75	@ 3.00
Cinnamic acid (see Industrial Chemicals).		
alcohol, bottles	lb. 3.35	@ 5.75
aldehyde, F.F.C., bottles	lb. 2.50	@ 3.00
Citral, 100 percent, cans	lb. 2.75	@ 3.00
Citronellal, bottles	lb. 2.75	@ 4.00
Citronellol, bottles	lb. 4.00	@ 5.35
Coumarin, C.P. (see Drugs and Fine Chemicals).		
Diphenyl oxide, bottles	lb. .90	@ 1.15
Diphenylmethane, bottles	lb. 1.75	@ 2.00
Ethyl cinnamate, bottles	lb. 3.50	@ 4.50
Eucalyptol (see Drugs and Fine Chemicals).		
Eugenol, cans	lb. 2.50	@ 3.00
Geraniol, cans	lb. 1.35	@ 5.00
Geranyl acetate, bottles	lb. 2.75	@ 6.00
Heliotropin, crystals, cans	lb. 1.75	@ 4.00
Indol, C-P, bottles	oz. 2.60	@ 9.50
Ionone, bottles	lb. 5.00	@14.00
Isoeugenol, bottles	lb. 3.80	@ 4.25
Linalol, cans	lb. 3.00	@ 5.00
Linalyl acetate, bottles	lb. 3.50	@ 7.25
Methyl anthranilate, bottles	lb. 2.25	@ 2.40
benzoate, bottles	lb. 1.85	@ 2.25
cinnamate, bottles	lb. 3.75	@ 5.00
hepetone, bottles	lb. 9.00	@10.00
heptine, carbonate, bottles	lb. 20.00	@26.00
salicylate (see Drugs and Fine Chemicals).		
Musk, ambrette, cans	lb. 6.00	@ 6.75
artificial, ketone, cans	lb. 7.25	@ 8.30
xylol, 100 percent, cans	lb. 2.15	@ 2.75
Myrbane (see Coaltar Products).		
Neroiln crystals, cans	lb. 1.40	@ 2.65
Phenylacetic acid, bottles	lb. 3.00	@ 8.50
aldehyde, bottles	lb. 5.00	@ 8.25
Phenylethyl alcohol, bottles	lb. 4.75	@ 5.75

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MYSORE SANDALWOOD OIL

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Rhodinol, bottles	lb.	6.25	@20.00
Safrol, domestic, drums, tins	lb.	.28	@ .31
Imported, drums, tins	lb.	.28	@ .30
Skatol, bottles	oz.	4.00	@10.00
Terpineol, C.P., drums	lb.	.34	@ .35
cans	lb.	.36	@ .37
Terpenyl acetate, cans	lb.	.90	@ 1.25
Thymol (see Drugs and Fine Chemicals).			
Vanillin (see Drugs and Fine Chemicals).			
Yara yara crystals, cans	lb.	1.50	@ 3.00

Petroleum Refineries Fuel Use Is Surveyed for 1927

A recently completed survey, made by the United States Bureau of Mines to determine the trend of fuel consumption at refineries in the United States, showed the following outstanding points:—A decrease in the use of oil for fuel in 1927 of over 5,000,000 barrels as compared with 1926; a decrease in the use of coal of over 1,000,000 short tons; small increases in the use of both natural gas and refinery gas; an increase in the use of petroleum coke.

The decrease in fuel-oil consumption was approximately 2,000,000 barrels each in the Atlantic Coast, Texas, and Louisiana-Arkansas districts, with an increase of 1,000,000 barrels in the Indiana-Illinois district, or a net decrease of 5,000,000 barrels. The decrease in fuel-oil consumption by refineries in the Texas and Louisiana-Arkansas areas was offset largely by increased consumption of natural gas and refinery gas, whereas the increased consumption in the Indiana-Illinois region was more than offset by the decrease in coal consumption.

The use of coal for fuel declined from 6,052,000 short tons in 1926 to 5,031,000 short tons in 1927. Practically all of this decrease was recorded in the Appalachian and Indiana-Illinois districts, which at the same time showed the largest percentage increase in the use of oil for fuel. It is probable, therefore, that although coal prices also fell off, a considerable quantity of oil replaced coal in this area in 1927. In addition, the group of refineries, which are by location more or less definitely committed to the use of coal for fuel, undoubtedly succeeded in saving a material amount of coal through the use of more efficient fueling methods.

A total of 130,815,000,000 cubic feet of natural gas was consumed for fuel at refineries in 1927. This represents an increase of 8 percent over the 1926 total. Nearly all of this increase resulted from the opening of a line from the Monroe field at Baton Rouge, La. Had this line not been opened, there would have been a decrease in the use of natural gas, as a number of districts, particularly the Rocky Mountain, reported decreases in its use. The use of refinery or still gases for fuel did not change materially during 1927, there being a total of 52,807,000,000 cubic feet burned as compared with 52,077,000,000 cubic feet in 1926. Refinery gases are largely a product of cracking and it was probably more than a coincidence that a few districts in which cracking slowed down in 1927 also reported less refinery gas used as fuel.

Pressure-Still Coke

Refinery engineers have recently given much attention to the problem of devising a thoroughly satisfactory method of burning the increasing production of pressure-still coke. That some progress was made in 1927 would seem to be indicated by the fact that consumption at refineries increased from 408,000 short tons in 1926 to 450,000 short tons in 1927, the latter figure being equivalent to 40 percent of the total output. Coke, particularly the type obtained by so-called dry distillation, makes a very superior fuel from point of heat units, but is one which requires constant mechanical supervision.

The problem of fuel economy continued to occupy the attention of many refinery engineers, and it was largely through their efforts that the fuel requirements in 1927 per barrel of crude refined were less than ever before. In order to arrive at this conclusion, the consumption of the various fuels was reduced to their b. t. u. equivalents and gave a total of 584,000,000,000,000 b. t. u. used in 1927 as compared with 630,000,000,000,000 b. t. u. in 1926. There was 779,264,000 and 828,380,000 barrels of crude petroleum refined in the United States in 1926 and 1927, respectively; these amounts on division indicated a requirement per barrel of 809,000 b. t. u. in 1926 and 705,000 b. t. u. in 1927, a decrease of approximately 13 percent.

Appalachian District Fuel

The Appalachian district again required a greater number of heat units per barrel of crude refined than any other district. The explanation of this fact undoubtedly lies in the large number of small refineries which were built in the days of "cheese-box" and shell stills before the present era of pipe-stills and heat exchangers; in the use for fuel of large quantities of coal, which ranks comparatively low in efficiency as used in the average Appalachian refinery; and to the fact that most of the crude processed in the Appalachian district is refined through the lubricant stage, and necessarily requires more fuel than simple skimming operations. The only district to report a higher fuel requirement per barrel in 1927 was the comparatively minor Louisiana Gulf Coast district. California and Inland Texas were the leading districts from the standpoint of low fuel requirements, due primarily to the fact that little of the crude refined in these districts was carried beyond the skimming stage, although it is suggested also that weather conditions might have been a factor.

A large part of the credit for the success attending fuel economy in 1927 may be attributed to the pipe-still. This type of equipment has been in general use for but a short time, hence its effects on fuel consumption were perhaps not widely felt prior to 1927. In combination with heat-exchangers, the pipe-still enables the refiner to double or triple his throughput, often without appreciably raising fuel requirements.

Detailed figures on fuel used follow:—

1926

	Oil* (1000s of bbls.).	Coal (1000s of short tons).	Gas (millions of cu. ft.). Natural.	Refinery.	Coke (1000s of short tons).	Other.	Total Crude runs B.t.u. (Billions approx.).	to stills (1000 of bbls.).	per bbl. crude run.
East coast	14,701	1,447	.....	9,642	105	.....	139,102	130,643	1,065,000
Appalachian	666	1,644	2,501	1,550	3	†....	50,724	28,502	1,780,000
Ind., Ill., etc.	3,130	2,677	1	7,649	35	‡....	97,466	69,707	1,398,000
Oklahoma	2,010	6	25,957	5,427	7	.....	45,377	61,409	739,000
Kans. and Mo.	2,085	226	8,048	3,478	5	.....	30,638	35,097	873,000
Texas, Inland	1,954	.....	3,626	537	10	.....	16,395	36,183	453,000
Texas, Gulf coast	10,325	.....	25,121	12,370	127	.....	105,126	119,927	877,000
Totals, Texas	12,279	.....	28,747	12,907	137	.....	121,521	156,110	778,000
Ark.-La., inland	50	.....	9,056	769	.....	.....	10,616	19,507	544,000
La., Gulf coast	4,808	.....	.....	3,803	101	.....	35,871	51,505	696,000
Totals, La.-Ark.	4,858	.....	9,056	4,572	101	.....	46,487	71,012	655,000
Rocky Mountain	1,496	52	30,720	4,126	15	.....	47,366	29,205	1,622,000
California	5,251	.....	16,419	2,728	.....	.....	51,611	197,579	261,000
Totals, U. S.	46,416	6,052	121,449	52,077	408	.....	.....	779,264	809,000
Total b.t.u. (billions approx.)	278,496	157,352	127,522	54,681	12,240	1	630,292	.....	.....

1927

East coast	12,845	1,545	126	8,062	81	.....	128,267	150,559	852,000
Appalachian	703	1,277	2,547	1,482	5	¶....	41,802	28,941	1,444,000
Ind., Ill., etc.	4,773	2,036	276	5,390	44	‖....	88,845	75,807	1,172,000
Oklahoma	2,040	6	23,630	8,018	14	.....	46,047	65,699	701,000
Kans. and Mo.	2,328	121	7,398	2,074	7	.....	27,270	36,172	754,000
Texas, Inland	1,221	.....	4,666	1,328	8	.....	13,859	37,092	374,000
Texas, Gulf coast	9,031	.....	27,338	16,042	163	.....	104,625	130,003	805,000
Totals, Texas	10,252	.....	32,004	17,370	171	.....	118,484	167,095	709,000
Ark.-La., inland	57	.....	9,102	872	.....	.....	10,815	20,031	540,000
La., Gulf coast	2,248	.....	16,143	4,300	118	.....	38,493	50,413	764,000
Totals, La.-Ark.	2,305	.....	25,254	5,172	118	.....	49,308	70,444	700,000
Rocky Mountain	1,001	46	24,566	3,738	10	.....	37,321	25,026	1,487,000
California	5,215	.....	17,831	2,159	.....	.....	52,279	209,092	250,000
Totals, U. S.	41,462	5,031	133,623	53,465	450	.....	.....	828,835	711,000
Total b.t.u. (billions approx.)	248,772	130,806	140,304	56,138	13,500	3	589,523	.....	.....

* Includes acid sludge. † 102,901 kilowatts. ‡ 268,240 kilowatts. ¶ 437,783 kilowatts. ‖ 482,700 kilowatts.

The Community Service Stations Company, Davenport, Iowa, operating or controlling eleven service stations, has sold its business and equipment to the Skelly Oil Company.

During the first six months of this year, Colorado collected gasoline taxes on 65,920,356 gallons, amounting to $1,934,440. In the corresponding period of 1927 tax was paid on 57,701,371 gallons.

A Portuguese decree of July 31 places a special "national preservation" import tax on gasoline of 0.02 gold escudo per kilo, and on light mineral oils suitable for illumination 0.005 gold escudo per kilo.

Almost $32,000,000 was paid as oil bonuses, royalties and taxes to the Osage Indians in Oklahoma from 1917 to 1927 by the Phillips Petroleum Company, according to a statement made by the company August 30.

D. R. Dayhoff has been appointed Northwest manager for the Skelly Oil Company in the marketing of compressed natural gas for domestic use. He will have headquarters in the Plymouth building, Minneapolis.

The United Natural Gas Company's deep test well near Kane, Pa., has reached and penetrated its objective—the white medina sand—at 7,730 feet without striking gas in paying quantities. Drilling is being continued.

Henry Dolan has been appointed manager of refinery sales for the Bartles-Maguire Oil Company, with headquarters in Chicago. He succeeds L. B. Patterson, who is vacationing in California and has not announced his future plans.

The Magnolia Petroleum Company, subsidiary of the Standard Oil Company of New York, has purchased from the Associated Oil Company 520 acres in Webb and Zapata counties, Texas, with thirty-five oil wells and three gas wells.

A Swedish holder of an oil shale concession in Estonia is reported to have obtained a favorable solution of the question of distilling Estonian oil shale on a commercial basis. It is stated that the retorting process of the Swedish firm yields a high percentage of gasoline. Estonia contains oil shale deposits distributed over 2,500 square kilometers amounting to 5,625,000,000 metric tons. The shale yields 23 to 40 percent of crude oil, according to laboratory research.

S. C. I. Meets in New York

(Continued from page 53)

Rest Period of Plants

In a paper on "Chemical Treatment for Shortening the Rest Period of Plants, F. E. Denny, of the Boyce-Thompson Institute for Plant Research, Yonkers, N. Y., told of various chemicals with which experiments had been made. He said in part:—

The buds of many plants, after the cessation of active growth in the summer, become dormant and will not start into renewed growth at once, even if placed under the conditions of temperature and moisture that are usually favorable for growth. Thus, tubers of Irish potato, if replanted shortly after harvest, will not sprout again until after a considerable period has elapsed. The tubers remain in the ground, alive but inactive, until the end of their "period of rest," at which time they will then form sprouts. The length of this rest period varies with the variety of potato, but is usually at least one month, and may be as much as five or six.

Again, when woody shrubs such as lilac, flowering almond, or crabapple are brought indoors in the autumn and subjected to moist, warm conditions in order to induce blooming,

F. E. Denny

it is found that the plants do not respond at once. They are in the rest period, and buds do not develop until after several weeks. It is not ordinarily possible to obtain blooming specimens until after December, and, with some species, not until March.

Although there can be no doubt regarding the effectiveness of chemical treatments in shortening the rest period and in forcing early growth of dormant buds, much more experimental work needs to be done in applying the treatments to the special conditions that are encountered in practice. Adjustments to differences in varieties, to differences in stages of dormancy of the plants at the time of treatment, and to special requirements as to the date on which the crop should be brought to maturity, can be made only by numerous tests under practical conditions.

Cost of Treatment

From the standpoint of cost of chemicals and of safety to workmen applying them, these treatments leave little further to be desired. In the case of Irish potatoes, it is estimated that the cost for chemicals should not exceed 5 to 10 cents per bushel; woody shrubs in pots can be treated for 1 to 5 cents per plant, and several hundred thousand bulblets can be treated with one dollar's worth of chemical. The vapors of ethylene chlorhydrin are not explosive at ordinary temperatures when mixed with air in any proportion, and, although a solution of sodium thiocyanate is poisonous to animals, its toxicity is not high, and it is not believed that any considerable danger exists under the conditions of these treatments.

The uniformity with which results may be obtained with these methods is conducive to progress in the study of the causes of dormancy in plants, and of the physiological changes in the tissue of treated plants. The recognition that the dormancy is localized in the buds has permitted a concentration of attention upon the tissues which are of paramount importance. Some progress has already been made in this direction.

It must be recognized, however, that more effective chemicals should be found if possible. Thus, some species and some varieties do not respond to these treatments, and in all cases it would be desirable to find a chemical that could be used in much lower concentrations. The practical methods of bringing the chemicals in contact with the plants would be much simplified if this could be done. It is believed, therefore, that the search for more effective chemicals should be continued.

Pre-Oxidation of Coal

A paper on "Pre-Oxidation as a Preliminary Treatment to the Low Temperature Distillation of Coal" was read by Charles Hamilton Foott. He described various experiments undertaken by him in England along the line of his subject, saying in conclusion:—

The principal effects of pre-oxidation on the distillation products of coal observed during these experiments were:—(1) That the coking and swelling properties of the coal were reduced and finally destroyed; (2), that the yield of coke was at first increased and afterwards reduced; (3), that the temperature at which gas evolution was first observable was decreased and the yield of gas increased proportionately to the oxygen which had reacted with the coal during oxidation; (4), that the tar yield as a whole including the hydrogen and hydrocarbon in the gas was quickly reduced, all fractions apparently being diminished proportionately, while at the same time the tar became more stable; (5), that the yield of water increased up to a point, which had been established during the oxidation experiments as an intermediary "saturation point," after which it remained constant and that the increase in the yield of water appeared to be equivalent to the additional oxygen absorbed by the coal during the early stages of oxidation; (6), that the proportions of carbon dioxide and carbon monoxide in the gas were greatly increased at the expense of the hydrogen and hydrocarbon; (7), that the oxygen remaining in the coke was decreased at first, but when the "saturation point" was reached it increased rapidly, while at the same time the carbon, which remained fairly constant to begin with, quickly decreased and that the hydrogen toward the latter stages of oxidation also began to decrease.

The work is still in progress and we are at present engaged on an investigation of the effects of pre-oxidation on the composition of primary tar. In describing these experiments, therefore, I have restricted myself to discussing the apparatus and methods employed and the facts observed and have made no attempt to theorize as to the probable nature of the reaction taking place in the coal substance during oxidation and during the subsequent low temperature distillation.

Quinine Suit Settled

(Continued from page 16)

quinine at prices less than those fixed by the Dutch monopoly.

The protests and calls for relief became more numerous and insistent when the Hoshi Pharmaceutical Company, the Japanese manufacturer, joined the Kina Bureau, announcement of this being made November 15, 1926. The first official action of the United States government came October 17, 1927, when all quinine factors in this and foreign countries, were subpenaed before Judge John C. Knox and ordered to bring all documents, letters, papers, and memoranda of any and all kind concerning the sale of quinine dating from November 1, 1924, to date.

Japanese Agent Balked

This action coincided with allegations that demand had been made by the Dutch that Hosken & Co., Inc., this city, which controlled the sale of Japanese quinine in this country, abide by the provisions of the Kina Bureau agreements. The bureau was alleged even to have suggested that the Japanese maker ought to withdraw from the United States entirely and confine his sales to Japan and the Orient. William Hosken, president of the company bearing his name, refused to enter the combination fixing prices and sales policies in this country. He declared that he would continue to make his own contract terms and prices free from all control by the Dutch. Parallel with this, he went to Washington to establish his position, to protect himself, and to pray for relief.

The next move of the government came March 5, 1928, when William J. Donovan, the assistant to the Attorney-General of the United States, entertained all quinine factors in this country at his office in Washington. He there discussed with the importers and American manufacturers the relation of the foreign-controlled monopoly in quinine with the antitrust and revenue laws of this country.

Under an order issued by the United States District Court for the Southern District of New York, Israel B. Oseas, special assistant to the Attorney-General and chief officer in developing the government's quinine case, caused the seizure of approximately 400,000 ounces of quinine held in the warehouse of R. W. Greef & Co., Inc., this city, a concern closely allied with the Dutch manufacturers. The seizure was made under the revenue laws permitting such action when conspiracy to evade the laws of the land seemed apparent.

Mr. Oseas later went before the Federal grand jury in this city and, March 30, indictments on criminal charges were handed up against all quinine factors save Merck & Co., New York Quinine & Chemical Works, and Hosken & Co., Inc. These indictments carried six counts, which charged conspiracy to restrain trade, restrict competition, and raise prices for quinine. On the previous day, Mr. Oseas filed a bill in equity asking that the defendants named in the bill be enjoined from carrying on certain alleged conspiracies to monopolize trade and discriminate in prices.

Conferences Abroad

These two actions led to Mr. Donovan and Mr. Oseas going abroad for consultation at Paris with representatives of the houses under indictment and defendants in the equity proceedings. There the entire matter was discussed mainly with the Dutch, and the laws of the United States were made clear. June 11, a cable to the Department of Justice announced partial success of the negotiations to the extent that the Dutch were convinced that their interests would best be served by their coming to Washington to work out a definite program to bring them within the law. Mr. Camphuis and Mr. Van Linge came in July under guarantees of immunity from body seizure under the criminal indictments standing against them.

The negotiations in Washington led to agreement in the form of a consent decree. The two Dutchmen sailed for Holland July 13, pledging themselves that action of some kind would be taken promptly. The negotiations were made easier by the withdrawal of actions against all defendants save the Dutch quinine manufacturers. This action was taken by the government late in July and convinced the foreign representatives of its fairness and desire to reach an equitable settlement.

Cables received last week from Holland by R. W. Greef & Co., Inc., this city, indicated that the Dutch manufacturers were highly pleased with the courteous treatment accorded them by the officers of the United States government.

The effect of this decree on the quinine business in this country is problematical. It is said quite authoritatively that the larger buyers of quinine for manufacturing consumption in this country would probably place their orders direct in Holland, thus removing the sales conditions from control of the United States government. This would reduce sharply the amount of business left in this country for the American and other companies. In the meantime, plans are afoot in Japan looking to a marked increase in production there and the maintenance of much larger stocks in the United States by Hosken & Co., Inc.

Miscellaneous Oils

Chicago Vegetable Oils

(Continued from page 33)

barrels, 10½c. to 10¾c.; barrels, less than car lots, 11½c. to 12c.

CORN (tankcars)—Low acid last sold for 8⅝c. with the same price bid for more and 8¾c. asked; edible, barrels, car lots, 10¾c. to 11¼c.; barrels, less than car lots, 11½c. to 12.10c.

CHINA WOOD (sellers' tanks)—September-forward, 13¾c.; spots, barrels, less than car lots, Chicago, 15¾c.

SOYA BEAN (sellers' tanks)—Prompt shipment, 9c. to 15c.; spot, barrels, car lots, Chicago, 11c.

PEANUT (sellers' tanks)—Basis prime crude, 9¾c.; edible, barrels, 12¾c. to 13¼c.; barrels, less than car lots, 13¾c.

Copra

Conditions prevailing in domestic markets for copra underwent little change last week. On the coast quotations were steady at 4¾c. to 4⅞c. per pound, with the market quiet. Consular advices from the primary market reported heavy arrivals.

Manila Copra

WASHINGTON, Sept. 7, 1928.

The copra market was quiet during the week ended August 30, according to a cable from the American trade commissioner at Manila. Arrivals were heavy. All mills were operating. The equivalent of resecado delivered at Manila was 12¼ pesos per picul; Hondagua, 11⅝ pesos; Cebu, 11⅞ pesos.

Fatty Acids

Red Oil.—Owing to the firmer position of raw material the market for red oil had a steadier tone. Previous quotations, however, remained in effect. There was a fairly active demand.

Stearic Acid.—The market was stronger, influenced by a further rise in raw material. Quotations on stearic acid were again advanced by leading producers. Demand continued active.

Chicago Fatty Acids

CHICAGO, Sept. 7, 1928.

Although trading was still slow in the vegetable oils acid market, considerable interest is felt in the strengthening of animal fat prices, with the thought that this market may be stimulated as result. Buying was routine and while there was some backing and filling of prices, there was little sustained headway made in any direction, although most changes were lower. The stearic acid was unchanged although easy, while red oil showed a trifle strength. Cottonseed foots ranged firmer.

Ruling quotations were:—

FATTY ACIDS—Corn oil, double distilled, tankcars, 9¾c.; barrels, car lots, 9¼c. to 9⅜c.; barrels, less than car lots, 9½c.; coconut, tankcars, 11½c.; barrels, car lots, 12¾c.; barrels, less than car lots, 13c.; cottonseed, tankcars, 8¾c.; barrels, car lots, 9¼c.; barrels, less than car lots, 9½c.; settled cottonseed soap, 60-62 percent basis, 4⅝c., nominal; boiled down soap stock, 65 percent basis, 4¼c.; barrels, 5c.; cottonseed foots, 50 percent basis, 2¼c.

STEARIC ACID—High grade double press, 12¼c.; triple press, 14¼c.

RED OILS—Saponified, 9½c. to 10½c.; distilled, 9c. to 9½c.; tallow acidless, 11c. to 11¼c.

Fats and Greases

Grease.—Demand was rather quiet, consumers being averse to purchasing ahead, but offerings were light and market was firmer, with prices ⅛c. per pound higher.

Lard.—A somewhat better inquiry for cash product from domestic buyers was noted, though business was still of a conservative character. Reports were current of a fair export call. Changes in prices were moderate. Receipts of hogs in the West were light.

Stearin.—The market was stronger, oleo being ½c. per pound higher. There was a fair demand. Offerings were light.

Tallow.—A firm tone ruled and prices again advanced. There was a better demand. Offerings from producers were generally light. At the weekly auction in London the market was slightly easier; offerings were 664 casks, of which 211 were sold.

Domestic Grease Receipts

Receipts at New York last week, in packages:—

	Lard.	Tallow.	Grease.
Saturday	3,352	.....	.....
Monday	.....	.....	.....
Tuesday	7,905	.....	.....
Wednesday	12,680	.....	100
Thursday	2,050	.....	.....
Friday	2,151	.....	.....
Totals	28,138	.....	100
Since January 1—			
This year	2,036,893	550	10,213
Last year	2,437,905	400	15,730

Grease Exports

Exports from New York during the week ended September 6 included the following:—

	Pounds—			
	Lard.	Stearin.	Tallow.	Grease.
Friday	341,575	.....	.....	.....
Saturday	622,890	.....	.....	.....
Monday	.....	.....	.....	.....
Tuesday	1,818,635	.....	.....	114,000
Wednesday	75,835	.....	.....	.....
Thursday	1,153,978	.....	.....	.....
Totals	4,012,913	.....	.....	114,000
Prev. week	6,039,800	.....	.....	586,600
Last year	7,568,910	.....	118,000	520,800
Since Jan. 1—				
This yr.	214,861,772	612,400	317,312	21,123,520
Last yr.	278,041,975	318,000	208,000	35,235,000

Chicago Lard and Tallow

CHICAGO, Sept. 7, 1928.

Prices in the Chicago cash lard market improved at mid-week, with several good advances, and domestic buying of a fair to moderate nature. Regular in round lots and leaf lard were both quoted higher, feeling being that the position of the product had been improved by late supply and demand developments. Most of the grades of tallow were ranging fractionally stronger in price. Greases also were up an average of probably ¼c. to ½c. for each grade, with a good demand for several of the grades. Prime oleo stearin also moved upward.

The range of quotations from the opening on Saturday, September 1, to the close on Friday, September 7, is shown in the following tables:—

	Per 100 pounds—				Previous
	Open.	High.	Low.	Close.	Friday.
Cash	$12.30	$12.80	$12.30	$12.80	$12.22
Dec.	12.70	13.15	12.65	13.07	12.62
Jan.	12.90	13.32	12.90	13.25	12.82

Other quotations were:—

TALLOW (per pound tierces)—Edible, 9¼c. to 9½c.; fancy, 9c. to 9¼c.; prime packers', 8¾c.; No. 1 packers', 8¼c.; No. 2 packers', 7¾c.; No. 1 renderers', 8¼c. to 8¼c.; prime country, 8⅜c. to 8½c.; No. 1 country, 8c. to 8¼c.; No. 2 country, 6⅞c. to 7c.; B country, 7⅜c.

GREASE (per pound, tierces, unless stated)—Pigs' foot, 9c.; choice white, loose, 8¾c. to 9c.; export choice white, 10c.; 8¼c. to 8⅜c.; B white, 8c. to 8¼c.; crackling, 7¾c. to 7⅞c.; yellow, 7⅝c. to 8c.; house, 7⅜c. to 7¾c.; brown, 7⅜c. to 7½c.; bone naphtha, 6c. to 6¼c.

STEARIN (per pound, barrels)—Prime oleo, 11c. to 11½c. asked; lard, 15c. to 15½c.; A white grease, 8½c. to 8⅝c.; export A white, 9¾c.; yellow grease, 7⅞c. to 8c.; extra oleo stocks, 11¾c. to 12c.; No. 2 oleo stocks, 11c. to 11½c.

Liverpool Lard and Tallow

Quotations per cwt. on refined American lard in Liverpool last week were as follows:—

	Spot.	Sept.	Oct.	Jan.
	s. d.	s. d.	s. d.	s. d.
Saturday	65 6	65 0	65 0	66 3
Monday	65 9	65 3	66 3	66 9
Tuesday	65 9	65 3	66 3	67 0
Wednesday	66 3	66 0	66 9	67 3
Thursday	66 9	66 6	67 0	67 6
Friday	66 9	66 9	67 3	67 9

Quotations per cwt. on Australian tallow in Liverpool last week were as follows:—

	Choice.	Fine, good mixed.
	s. d.	s. d.
Saturday	43 6	41 0
Monday	.. ..	.. ..
Tuesday	43 6	41 0
Wednesday	43 6	41 0
Thursday	43 6	41 0
Friday	43 6	41 0

London Tallow Auction

LONDON, Sept. 5, 1928.

Tallow was easy at the auction today. Offerings were 664 casks, of which 211 were sold. Prices were:—

	Today.	Last week.
	s. d. s. d.	s. d. s. d.
Mutton	42 6@44 0	42 6@44 0
Beef	41 6@45 0	42 0@45 0
Beef, good mixed.	39 0@41 9	39 0@42 0

Animal Oils

Degras.—A fair inquiry was noted, with the purchasing generally limited to moderate quantities, consumers being averse to anticipating. The market retained a steady tone.

Lard.—Business was on a conservative scale, demand for comparatively small or moderate quantities being fair. Export trade was quiet. Prices were generally maintained at previous levels.

Neatsfoot.—The inquiry was fairly active in a jobbing way. Prices were unchanged to 25c. per 100 pounds lower, with the market steady. Spot supplies appear to be light or moderate.

Oleo.—The prevailing tone was steady. A fairly active inquiry was reported for export.

Movement of Oleo Products

Oleo oil exports and oleo stock receipts at New York last week were:—

	Oleo oil, Exports. Barrels.	Oleo stock. Receipts by rail. Tierces.
Friday	270	405
Saturday	...	...
Monday	...	290
Tuesday	2,100	605
Wednesday	635	75
Thursday	360	135
Totals	3,365	1,510
Since January 1—		
This year	107,972	51,348
Last year	163,400	43,704

Fish Oils

Cod.—An increase was noted in the volume of inquiries received, though consumers were still inclined to adhere to a conservative course in making purchases. Offerings for shipment were still rather light and supplies on spot limited. The market retained a steady tone.

Menhaden.—The local market for refined oil was rather quiet so far as new business was concerned, consumers being averse to purchasing ahead in view of the easy position of competing product. Offerings were generally light, however, and the market retained a steady tone. Crude was quiet, but generally firmer, influenced by unfavorable weather for fishing.

Sperm. — The market remained steady. Consumers were not inclined to anticipate, but there was a fair inquiry, and consumption is apparently on a normal scale.

Whale.—The refined situation lacked new features of importance, the market being steady, with quotations maintained at recently prevailing levels. There was a fair inquiry from local and outside buyers. Crude was quiet, with offerings light and quotations steady.

Baltimore Fish Oils

BALTIMORE, Sept. 7, 1928.

The menhaden fishing down the Chesapeake Bay and outside of the Virginia Capes has been discouraging in the last week because of the prevalence of strong northeast winds, with rains on several days, and the results have proved to be small, with the additions made to the stocks of fish oil inconsequential. Buyers do not seem to be any too eager to take up stocks at that. It should be said, however, that the factories have virtually no oil to dispose of and that the situation is in good shape so far as the absence of unsold stores is concerned.

Chicago Fish Oils

CHICAGO, Sept. 7, 1928.

Most of the fish oils traded in through Chicago have ranged slightly to considerably easier recently, and prices are showing moderate recessions. Buyers are not anxious to cover their requirements and sellers have been forced to offer inducements by lower prices. In some cases recessions cover 5 to 8 percent from recent asking prices. Menhaden is showing sizeable reduction in prices. West Coast oils also are lower. Ruling quotations follow:—Cod, domestic, spot, barrels, 68c. to 70c.; Newfoundland, spot, barrels, 70c. to 73c.; menhaden, pressed, spot, barrels, 68c. to 73c.; unpressed, spot, barrels, 65c. to 67c.; sardine, Pacific Coast, sellers' tanks, 47½c. to 50c.; salmon, Pacific Coast, sellers' tanks, 45c. to 50c.

London Sperm Oil Prices

Quotations on sperm oil in London during last week were:—

	Per cwt. s.	d.
Saturday	28	6
Monday	28	6
Tuesday	28	6
Wednesday	28	6
Thursday	28	6
Friday	28	6

Current Prices

(For late price changes, see page 2)

Animal Oils

Degras, common, domestic, barrels	lb.	.04½@	.06
English, barrels	lb.	.05 @	.05¼
German, barrels	lb.	.03¾@	.04
neutral, domestic, barrels	lb.	.07¾@	.09½
English, barrels	lb.	.08¼@	.09
German, barrels	lb.	.06½@	.07
Horse, barrels	lb.	.09½@	Nom.
Lard, No. 1, barrels	100 lbs.	11.50 @	—
No. 2, barrels	100 lbs.	11.25 @	—
extra, barrels	100 lbs.	12.50 @	—
No. 1, barrels	100 lbs.	12.25 @	—
winter, strained, barrels.			
	100 lbs.	13.00 @	—
prime, barrels	100 lbs.	16.00 @	—
Neatsfoot, cold pressed, barrels.			
	100 lbs.	18.50 @	—
extra, barrels	100 lbs.	12.50 @	—
No. 1, barrels	100 lbs.	11.75 @	—
pure, barrels	100 lbs.	15.25 @	—
Oleo, No. 1, barrels	100 lbs.	13.50 @	—
No. 2, barrels	100 lbs.	12.50 @	—
No. 3, barrels	100 lbs.	11.25 @	—
Tallow, acidless, barrels	100 lbs.	11.50 @	—

Fish Oils

Cod, Newfoundland, barrels	gal.	.66 @	.67
Herring, coast, tanks	gal.	.40	Nom.
Menhaden, crude, f.o.b. Baltimore, tanks	gal.	.41 @	—
refined, light pressed, barrels,	gal.	.60 @	.61
white, bleached, barrels	gal.	.65 @	.66
yellow, bleached, barrels	gal.	.62 @	.63
Salmon, coast, tanks	gal.	.44	Nom.
Sardine, coast, tanks	gal.	.40	Nom.
Sperm, bleached, f.o.b. New Bedford, barrels	gal.	.84 @	.86
natural, f.o.b. New Bedford, barrels	gal.	.78 @	.80
Whale, crude, No. 1, coast, tanks	lb.	.07¼	Nom.
No. 2, coast, tanks	lb.	.06¾	Nom.
refined, winter, bleached, barrels	gal.	.80 @	—
extra, barrels	gal.	.82 @	—
natural barrels	gal.	.78 @	—

Vegetable Oils

Castor (see Drugs and Fine Chemicals).			
Chinawood, barrels or drums	lb.	.15 @	—
September arrival	lb.	.14¾@	—
Coast, tanks, spot	lb.	.13¾@	—
September shipment from Coast	lb.	.13½@	—
October	lb.	.13½@	—
barrels or drums, 1c. per lb. over tankcar prices.			
Coconut, Ceylon grade, barrels,	lb.	.09¾@	—
Coast, tanks	lb.	.07¾@	.07¾
Cochin grade, barrels	lb.	.09½	Nom.
Manila, barrels	lb.	.09¼@	—
tanks	lb.	.08¼@	.08¼
Coast, tanks	lb.	.07¾@	.07¾
Corn, crude, barrels	lb.	.10	Nom.
mills, tanks	lb.	.08¾@	.08¾
refined, barrels	lb.	.12	Nom.
Mustard, barrels	gal.	.90 @	—
Olive, denatured, barrel	gal.	1.35 @	1.50
edible, barrels	gal.	2.20 @	2.40
foots, green, barrels	lb.	.10½@	—
Palm, Lagos, casks	lb.	.08½@	.08¾
shipment, casks	lb.	.07¾@	—
Niger, casks	lb.	.07¾@	—
shipment, casks	lb.	.07¼@	.07¾
Palm, kernel, casks	lb.	.09¼@	.09¼
Peanut, crude, barrels	lb.	.12	Nom.
mills, tanks	lb.	.09¼	Nom.
refined, deodorized, barrels	lb.	.13½	Nom.
Perilla, barrels	lb.	.13½	Nom.
Poppy seed, barrels	gal.	1.70 @	—
Rapeseed, blown, barrels	gal.	1.04 @	1.05
refined, barrels	gal.	.85 @	.87
Sesame, refined, drums	lb.	.14¼@	—
Soya bean, blown, barrels	lb.	.13¼@	.13½
crude, barrels	lb.	.12¼@	.12½
shipment from Orient, coast, tanks	lb.	.09¼@	.09¾
Tea, coast, barrels	lb.	.18	Nom.
Vegetable tallow, coast, mats	lb.	.07¾	Nom.

Fatty Acids

Coconut oil, mills, tanks	lb.	.11	Nom.
Corn oil, mills, tanks	lb.	.08¾	Nom.
Cottonseed oil, mills, barrels	lb.	.08¾	Nom.
Oleic (see red oil).			
Red oil, distilled, barrels	lb.	.09¾@	.10¼
tanks	lb.	.09 @	—
saponified, barrels	lb.	.10 @	.10½
tanks	lb.	.09¼@	—
Stearic, double pressed, bags	lb.	.13 @	.13½
triple pressed, bags	lb.	.16 @	.16½

Gums and Waxes

(Continued from page 35)

Current Prices

(For late price changes, see page 2)

Gums

Aloe, Barbados, true, cases	lb.	1.00 @	1.10
Cape, cases	lb.	.14 @	.15
Curacao, cases	lb.	.16 @	.17
gourds, barrels	lb.	.45 @	.50
Socotrine, kegs	lb.	.43 @	.45
Ammoniac, tears, cases	lb.	.48 @	.50
Arabic (acacia), amber sorts, cleaned, bags	lb.	.10¾@	.12
first sorts, bags	lb.	.24 @	.25
second sorts, bags	lb.	.22 @	.23
white, bags	lb.	.22 @	.25
powdered, barrels, kegs	lb.	.17½@	.18
Asafetida, cases	lb.	.24 @	.25
powdered, barrels, boxes	lb.	.50 @	.55
Benzoin, Siam, cases	lb.	1.30 @	1.60
Sumatra, cases	lb.	.40 @	.42
Camphor, refined, Japanese, slabs, cases	lb.	.60 @	.61
tablets, tins	lb.	.73 @	.74
powdered, barrels	lb.	.67 @	.68
Chicle, bags	lb.	.58 @	.60
Euphorbium, cases	lb.	.15 @	.16
Galbanum, cans	lb.	1.10 @	1.15
Gamboge, mass or pipe, cases	lb.	1.15 @	1.20
powdered, barrels	lb.	1.25 @	1.30
Ghatti, soluble, bags	lb.	.17 @	.19
superior, bags	lb.	.10 @	.11
Guaiac, cases	lb.	.32 @	.34
strained, cases	lb.	.70 @	.71
Karaya, powdered, barrels, boxes, drums	lb.	.12 @	.30
Kino, tins	lb.	.55 @	.60
Mastic, cases	lb.	.62 @	.63
Myrrh, cases	lb.	.85 @	.90
Olibanum, siftings, cases	lb.	.12½@	.13
tears, cases	lb.	.14½@	.26
Opium (see Drugs, page 6).			
Sandarac, cases	lb.	.26 @	.30
Scammony, cases	lb.	1.20 @	1.35
Senegal, picked, bags	lb.	.22 @	.24
sorts, bags	lb.	.10¾@	.12
Storax, cases	lb.	.37½@	.40
Tragacanth, Aleppo, 1, cases	lb.	1.55 @	1.60
No. 2, cases	lb.	1.45 @	1.50
No. 3, cases	lb.	1.20 @	1.25
No. 4, cases	lb.	1.10 @	1.20
No. 5, bags	lb.	.85 @	.95
No. 6, bags	lb.	.60 @	.70
sorts, bags	lb.	.50 @	—
Turkish, No. 1, cases	lb.	1.20	Nom.
No. 2, cases	lb.	.75 @	.80
No. 3, bags	lb.	.55 @	.60
No. 4, bags	lb.	.40 @	.50

Waxes

Bayberry, imported, bags	lb.	.30 @	.32
Beeswax, white, pure, cases	lb.	.50 @	.55
yellow, African, bags	lb.	.36 @	.37
Brazilian, bags	lb.	.40 @	.41
Chilean, bags	lb.	.39 @	.40
refined, cases	lb.	.41 @	.42
Candelilla, bags	lb.	.23 @	.24
Carnauba, flor, bags	lb.	.53 @	.54
No. 1, bags	lb.	.46 @	.48
No. 2 North Country, bags	lb.	.35 @	.36
yellow, bags	lb.	.43 @	.46
No. 3 chalky, bags	lb.	.26 @	.28
North Country, bags	lb.	.26 @	.28
Ceresin, domestic, white, bags	lb.	.10 @	.11
yellow, bags	lb.	.09 @	.10
Imported, snow white, 145-147 m.p., bags	lb.	.21 @	.23
154-156 m.p., bags	lb.	.23 @	.25
158-160 m.p., bags	lb.	.25 @	.27
160-165 m.p., bags	lb.	.30 @	.32
yellow, 150-153 m.p., bags	lb.	.12½@	—
135-138 m.p., bags	lb.	.13 @	—
157-160 m.p., bags	lb.	.13¼@	—
167-170 m.p., bags	lb.	.14 @	—
Japan, cases	lb.	.17¾@	.18
Montan, crude, bags	lb.	.07 @	.07½
Ozokerite, black, 160 m.p., bags,	lb.	.24 @	.25
green, 170 m.p., bags	lb.	.26 @	.30
Spermacetti blocks, cases	lb.	.26 @	.27
cakes, cases	lb.	.27 @	.28

Shellac

Bone dry, bleachers', 100 barrels or more	lb.	.55 @	.59
50 to 99 barrels	lb.	.56 @	.60
10 to 49 barrels	lb.	.57 @	.61
1 to 9 barrels	lb.	.58 @	.62
refined, barrels	lb.	.70 @	.63
D.C., cases	lb.	.60 @	.61
Diamond I, cases	lb.	.60 @	.61
Superfine, bags	lb.	.49 @	.50
T.N., bags	lb.	.45 @	.46
V.S.O., cases	lb.	.60 @	.61

Rosine Rosebelle Roz, confidential secretary to John R. Anderson, of John R. Anderson & Co., shellac broker, this city, has returned from a vacation of two weeks at Culvers Lake, near Branchville, N. J.

Samuel Gillespie, of L. C. Gillespie & Sons, and an officer in the firm of the Rogers-Pyatt Shellac Company, both of this city, departed last Thursday for a week-end in the summer colony at Lake Placid.

Fats and Greases

Grease, house, tierces	lb.	.07½@	.07⅝
white, tierces	lb.	.07⅝@	.09¾
yellow, tierces	lb.	.07⅝@	.07¾
Lard, city, tierces	100 lbs.	12.75 @	—
compound, tierces	100 lbs.	11.75 @	12.00
Middle Western, tierces	100 lbs.	13.20 @	—
neutral, tierces	100 lbs.	14.50	Nom.
prime Western, tierces	100 lbs.	13.30 @	—
Stearin, oleo, barrels	lb.	.12 @	.12½
Tallow, edible, barrels	lb.	.09¾@	.10
extra, works, loose	lb.	.08½@	—
special, works, loose	lb.	.08¾@	—
Wool grease (see degras, Animal Oils).			

Candles

Candles, adamantine, 6s, 16 oz., 20-set cases	set.	.14½@	.15⅝
40-set cases	set.	.14 @	.14½
paraffin, cs., 14 oz., case of 40 sets	set.	.10 @	.10¼
6s, 14 oz., case of six cartons containing 36 sets	set.	.11 @	.11¼
6s, 12 oz., 40-set, cases	set	.09 @	.09¼
6s, 12 oz., cases of six cartons containing 36 sets	set	.10 @	.10¼
patent ends	set.	.17¾@	.18
stearin, 6s, 16 oz., plain, cases,	set.	.16¾@	.17

Gasoline and Kerosene: Tankwagon and Service Station Prices

New England Territory

	Cents per gallon—Gasoline—Tankwagon.	Gasoline—Service station.	Kerosene.
Augusta, Me.	21	23	15
Boston, Mass.	18	20	15
Bridgeport, Conn.	17	21	15
Burlington, Vt.	20	22	15
Hartford, Conn.	18	22	14
Manchester, N. H.	20	23	15
New Haven, Conn.	18	22	15
New London, Conn.	17	21	15
Portland, Me.	18	20	14
Providence, R. I.	18	22	15
Springfield, Mass.	18	20	15
Worcester, Mass.	18	20	15

Trunk Line Territory

Albany, N. Y.	18	20	15
Allentown, Pa.	17	22	14
Altoona, Pa.	18	23	16
Annapolis, Md.	21	24	14
Atlantic City, N. J.	19	21	14
Baltimore, Md.	21	24	12
Binghamton, N. Y.	18	21	15
Buffalo, N. Y.	18	20	14
Cumberland, Md.	21	24	14
Dover, Del.	18	23	15
Erie Pa.	18	23	15
Harrisburg, Pa.	18	23	15
Newark, N. J.	19	21	14
New York, N. Y.	18	20	15
Philadelphia, Pa.	18	23	15
Pittsburgh, Pa.	18	23	15
Rochester, N. Y.	18	20	14
Scranton, Pa.	18	23	15
Syracuse, N. Y.	18	20	15
Trenton, N. J.	19	21	14
Utica, N. Y.	18	20	14
Warren, Pa.	18	23	15
Washington, D. C.	19	22	14
Wilkes-Barre, Pa.	18	23	15
Wilmington, Del.	18	23	15

Southeastern Territory

Atlanta, Ga.	22	24	14
Augusta, Ga.	22	25	16.5
Birmingham, Ala.	20	13	14.5
Charlotte, N. C.	21	24	14
Charleston, S. C.	21	24	14
Columbia, S. C.	21	24	14
Danville, Va.	22	25	14
Hickory, N. C.	21	24	14
Jacksonville, Fla.	20	23	11.5
Macon, Ga.	22	25	14.5
Miami, Fla.	23	26	14.5
Mobile, Ala.	19	22	14
Montgomery, Ala.	18	21	15.5
Mt. Airy, N. C.	21	24	14
Norfolk, Va.	21	24	14
Pensacola, Fla.	22	25	13
Petersburg, Va.	22	25	14
Richmond, Va.	22	25	14
Roanoke, Va.	22	25	14
Salisbury, N. C.	21	24	14
Savannah, Ga.	20	20	14.5
Tampa, Fla.	21	24	13

Southern Territory

	Cents per gallon—Gasoline—Tankwagon.	Gasoline—Service Station.	Kerosene.
Charleston, W. Va.	21	24	13
Chattanooga, Tenn.	20.5	23.5	15
Clarksdale, Miss.	20	23	12.5
Covington, Ky.	20	23	15.5
Gulfport, Miss.	21.5	24.5	14
Jackson, Miss.	20	23	13.5
Keyser, W. Va.	21	24	14
Knoxville, Tenn.	20.5	23.5	15
Lexington, Ky.	19	21	15.5
Louisville, Ky.	19	22	15
Memphis, Tenn.	17.5	17.5	14
Nashville, Tenn.	19	22	15
Natchez, Miss.	19.5	22.5	14
Parkersburg, W. Va.	18	21	14
Vicksburg, Miss.	19.5	22.5	14
Wheeling, W. Va.	21	24	14
Williamsburg, W. Va.	21	24	14

C. F. A. Territory

Chicago, Ill.	15	17	12
Cincinnati, Ohio	19	21	14.5
Cleveland, Ohio	19	21	14.5
Columbus, Ohio	19	21	14.5
Davenport, Iowa	18.5	20.5	12.3
Dayton, Ohio	19	21	13.5
Decatur, Ill.	15.2	17.2	12.1
Detroit, Mich.	18.8	20.8	13.7
East St. Louis, Ill.	14.1	16.35	11.2
Evansville, Ind.	18.4	20.4	13.4
Fort Wayne, Ind.	18.4	20.4	13.4
Grand Rapids, Mich.	18.7	20.7	13.6
Indianapolis, Ind.	18.2	20.2	12.2
Joliet, Ill.	15.4	17.4	12.3
La Crosse, Wis.	18.2	20.2	13
Madison, Wis.	17.3	19.3	12.1
Milwaukee, Wis.	17.1	19.1	11.9
Peoria, Ill.	15.2	17.2	12.1
Saginaw, Mich.	18.9	20.9	13.8
South Bend, Ind.	18.4	20.4	13.4
Toledo, Ohio	19	21	14.5

Intermountain Territory

Albuquerque, N. M.	22	25	17
Boise, Idaho	24.5	27.5	19
Butte, Mont.	23.5	26.5	19
Casper, Wyo.	19	22	13
Cheyenne, Wyo.	20	23	14.5
Denver, Colo.	19	22	14.5
Grand Junction, Colo.	22.5	25.5	18
Helena, Mont.	23.5	26.5	19
Pueblo, Colo.	19	22	14.5
Salt Lake City, Utah	22	25	17
Twin Falls, Idaho	24.5	27.5	19

Southwestern Territory

	Cents per gallon—Gasoline—Tankwagon.	Gasoline—Service station.	Kerosene.
Alexandria, La.	16	19	15
Baton Rouge, La.	16	18	13.5
Bartlesville, Okla.	16.5	18.5	10.5
Bristol, Tenn.	19	23	14
Dallas, Texas	17	21	11
El Dorado, Kan.	14.8	16.8	10.8
El Paso, Texas	18	21	17
Fort Smith, Ark.	18	20	13
Fort Worth, Texas	17	20	11
Houston, Texas	17	21	15
Joplin, Mo.	17.5	19.5	11.2
Kansas City, Mo.	17.9	19.9	10.6
Kansas City, Kan.	14.8	16.8	9.8
Lake Charles, La.	17.5	19.5	15
Little Rock, Ark.	23	24	13
Muskogee, Okla.	18	20	11
New Orleans, La.	17.5	19.5	15
Oklahoma City, Okla.	17	19	11
San Antonio, Texas	17	20	10
Springfield, Mo.	17.8	19.8	11.5
St. Joseph, Mo.	17.5	19.5	11.2
St. Louis, Mo.	16.6	18.9	11.3
Shreveport, La.	17.5	19.5	14
Texarkana, Ark.	18.5	22.5	13
Tulsa, Okla.	16	18	11
Wichita, Kan.	14.8	16.8	10.8

Pacific Coast Territory

Los Angeles, Cal.	17.5	20.5	15.5
Phoenix, Ariz.	23	27	20.5
Portland, Ore.	18.5	21.5	16.5
Pueblo, Colo.	18	18	15.5
Reno, Nev.	23	26	19
San Francisco, Cal.	18	21	15.5
Seattle, Wash.	17.5	20.5	16.5
Spokane, Wash.	21.5	24.5	20.5
Tacoma, Wash.	17.5	20.5	16.5

Western Trunk Line Territory

Des Moines, Iowa	18.5	20.5	12.3
Duluth, Minn.	18.5	20.5	12.9
Fargo, N. D.	19.9	21.9	14.9
Huron, S. D.	20.5	22.5	13.9
Keokuk, Iowa	18.5	20.5	12.3
McCook, Neb.	17.75	19.75	13.75
Minneapolis, Minn.	17	20.2	12.9
Norfolk, Neb.	16.75	18.75	12.75
North Platte, Neb.	17.75	19.75	13.50
Omaha, Neb.	16.25	18.25	12.25
St. Paul, Minn.	17	19	12.9
Scott's Bluff, Neb.	17.75	19.75	13.25
Sioux City, Iowa	18.1	20.1	11.9
Sioux Falls, S. D.	19	21	13.4

Explanatory Notes

Tankwagon and service station prices of gasoline quoted above include State taxes of 5c. per gallon in South Carolina, New Mexico, Arkansas, Florida, Virginia and Kentucky; 4c. per gallon in Arizona, Alabama, Georgia, Idaho, Maine, New Hampshire, North Carolina, West Virginia, Nevada, South Dakota, Maryland, Mississippi; 3½c. per gallon in Utah; 3c. per gallon in Tennessee, Delaware, Texas, Colorado, Michigan, Indiana, California, Iowa, Ohio, Vermont, Montana, Wyoming, Oklahoma, Pennsylvania and Oregon; 2c. per gallon in Connecticut, Wisconsin, Nebraska, Louisiana, Rhode Island, New Jersey, Washington, Minnesota, North Dakota, District of Columbia, Missouri and Kansas.

Gulfport, Miss., prices include Harrison county privilege tax of 2c. per gallon in addition to the State tax.

Georgia prices include 1c. a gallon tax on kerosene; Alabama, ½c. on kerosene; Florida, 0.125c. on both gasoline and kerosene; Kansas City, St. Louis, St. Joseph and Springfield, Mo., prices on gasoline include a ½c. local tax; Montgomery, Ala., and Pensacola, Fla., prices include local taxes of 1c. on gasoline.

In Standard Oil of Indiana territory tankwagon prices for kerosene subject to 1c. discount on dumps of 50 gallons or more.

Outside the Chicago district the following quantity discount schedule is in effect on monthly tankwagon deliveries of gasoline:—6,000 gallons or more, 1½c.; 10,000 gallons or more, 2c.; 15,000 gallons or more, 3c.

Within the Chicago district the following quantity discount schedule ie in effect on tankwagon deliveries of gasoline:—750 to 2,000 gallons, ½c.; 2,000 to 3,000 gallons, ¾c.; 3,000 to 6,000 gallons, 1c.; 6,000 to 10,000 gallons, 1½c.; 10,000 to 15,000 gallons, 2c.; 15,000 gallons or more, 3c.

If the quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term, less the monthly payments made during the year.

In Oklahoma the Magnolia Petroleum Company and other marketers have established the following schedule of discounts:—Over 750 gallons a month, ½c. per gallon; over 2,000 gallons, ¾c.; ovr 3,000 gallons, 1c.; over 4,500 gallons, 1¼c.; over 6,000 gallons, 1½c.; over 8,000 gallons, 1¾c.; over 10,000 gallons, 2c. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited for the year, less any monthly purchases. The schedule for service station deliveries is as follows:—Over 200 gallons a month, 1c. per gallon; over 300 gallons, 1¼c.; over 400 gallons, 1½c.; over 500 gallons, 1¾c.; over 600 gallons, 2c. The same rule holds good for annual purchases as in the tankwagon discounts.

Gasoline Production in July

Daily Average Output of 1,061,000 Barrels Again Establishes New High

Runs of crude petroleum to stills once more reached a new high level in July, when the daily average crude throughout was 2,603,000 barrels. The major portion of this increase was in domestic crude since daily average runs to stills of foreign crude showed but a slight increase, according to the United States Bureau of Mines.

Gasoline production again established a new high record in July when the daily average output was 1,061,000 barrels. Daily average domestic demand for gasoline passed the 1,000,000-barrel mark in July for the first time in history, when it amounted to 1,032,000 barrels. This represents an increase over June of 65,000 barrels and over July, 1927, of 72,000 barrels, or 7.5 percent. Daily average exports of gasoline showed a small increase. Stocks of gasoline again showed a material decline, decreasing in July from 34,393,000 barrels on the first of the month to 30,392,000 barrels on hand July 31. At the current rate of total demand these stocks represent 25 days' supply, as compared with 30 days' supply on hand a month ago and 37 days' supply on hand a year ago.

The demand for kerosene rallied from the slump of the previous month but stocks showed a small increase. Both the daily average production and daily average domestic demand for lubricants declined in July as compared with June. Stocks of wax again fell off and on July 31 amounted to 84,476,000 pounds. The daily average domestic demand for this commodity in July was considerably below that for June.

The refinery data of this report were compiled from schedules of 334 refineries, with an aggregate daily crude oil capacity of 3,166,000 barrels. These refineries operated during July at 82 percent of their recorded capacity as compared with 326 refineries operating at 81 percent of their capacity in June.

Detailed figures follow:—

Runs to Stills

	Barrels—Crude oil—Domestic.	Crude oil—Foreign.	Unfinished oils.	Natural gasoline.	Total input.
United States totals	73,433,000	7,267,000	3,325,000	2,802,000	86,827,000
Daily average, July, 1928	2,368,800	234,400	107,300	90,400	2,800,900
Daily average, June, 1928	2,288,600	234,100	135,300	91,000	2,749,000

Crude Petroleum Data

	Thousands of barrels—Runs to stills. Total.	Runs to stills. Daily av'age.	Imports. Total.	Imports. Daily av'age.	Exports. Total.	Exports. Daily av'age.	Stocks end of period.
July, 1928	80,700	2,603	7,878	254	1,669	54	*387,458
June, 1928	75,681	2,523	6,553	218	1,879	63	*389,948
January-July, 1928	512,589	2,407	45,884	215	10,349	49	*387,458
July, 1927	71,405	2,303	4,823	156	1,089	35	*349,679
January-July, 1927	476,326	2,247	30,818	145	8,628	41	*349,679

Refined Products Data

	Thousands of barrels—Production. Total.	Production. Daily av'age.	Imports. Total.	Imports. Daily av'age.	Exports. Total.	Exports. Daily av'age.	Stocks end of period.	Domestic demand. Total.	Domestic demand. Daily av'age.
Gasoline—									
July, 1928	32,884	1,061	267	9	5,167	167	30,392	31,985	1,032
June, 1928	30,675	1,023	212	7	4,808	160	34,393	29,022	967
Jan.-July, 1928	207,615	975	2,512	12	31,868	150	30,392	180,205	846
July, 1927	28,040	905	190	6	3,224	104	39,106	29,750	960
Jan.-July, 1927	188,615	890	3,075	15	25,796	122	39,106	165,811	782
Kerosene—									
July, 1928	4,994	161	19	1	1,834	59	8,470	3,079	99
June, 1928	4,849	162	24	1	1,655	55	8,370	2,385	80
Jan.-July, 1928	34,666	163	127	1	13,211	62	8,470	20,827	98
July, 1927	4,484	145	...	...	1,376	44	9,143	2,532	82
Jan.-July, 1927	32,431	153	8	...	10,892	51	9,143	20,979	99
Gas oil and fuel oil—									
July, 1928	36,941	1,192	484	16	4,261	137	†133,073	...	...
June, 1928	35,565	1,186	468	16	4,238	141	†130,249	...	...
Jan.-July, 1928	239,269	1,123	4,518	21	27,886	131	†133,073	...	...
July, 1927	33,554	1,082	849	27	4,070	131	†121,901	...	...
Jan.-July, 1927	226,085	1,066	5,569	26	27,425	129	†121,901	...	...
Lubricants—									
July, 1928	2,827	91	1	...	1,063	34	7,667	1,930	62
June, 1928	3,009	100	1	...	1,095	37	7,832	2,143	71
Jan.-July, 1928	20,244	95	6	...	6,892	32	7,667	13,551	64
July, 1927	2,672	86	...	...	977	32	7,496	1,827	59
Jan.-July, 1927	18,152	86	5	...	5,739	27	7,496	12,498	59
Wax (1000s of lbs.)—									
July, 1928	45,273	1,460	2,226	72	35,290	1,138	84,476	19,722	636
June, 1928	50,792	1,693	1,715	57	33,594	1,120	‡91,989	‡30,563	‡1,019
Jan.-July, 1928	359,899	1,690	13,013	61	255,727	1,201	84,476	183,347	861
July, 1927	47,979	1,548	2,789	90	25,970	838	191,501	32,105	1,036
Jan.-July, 1927	343,222	1,619	8,841	42	182,234	860	191,501	163,659	772

* Includes California light crude. † Includes California heavy crude and fuel oil. ‡ Revised.

Natural Gasoline in July, 1928

The production of natural gasoline in the United States in July, 1928, amounted to 143,200,000 gallons, or a daily average of 4,620,000 gallons. Although this represents only a slight decline in daily average from the previous month, it was the third consecutive month in which a decline was recorded. Daily average output in both California and in the Oklahoma-Kansas district increased in July but the output of the remaining districts in general fell off. The heavy demand for gasoline made itself felt in natural gasoline stocks held at the plants, which declined from 27,202,000 gallons on July 1, to 20,044,000 gallons on July 31. The latter figure was less than half the stocks of a year ago. Blending at the plants again showed a small increase over the preceding month. Details follow:—

	Thousands of gallons—Natural gasoline—Production—July, 1928.	Production—June, 1928.	Jan.-July, 1928.	July, 1927.	Stocks end of month—July, 1928.	Stocks end of month—June, 1928.	Blended motor fuel July, 1928.—Naphtha—Natural gasoline used.	Naphtha—other oils used.	Stocks end of month.
Appalachian	5,500	6,200	59,400	5,400	1,913	3,120	130	233	255
Ind., Ill. etc.	900	1,000	8,400	1,100	304	307	42	4	16
Okla., Kans., etc.	51,300	49,800	363,500	48,200	10,479	13,429	2,102	2,856	667
Texas	26,200	25,900	185,100	25,500	4,378	7,328	199	471	139
La. and Ark.	7,300	7,100	50,600	7,000	1,003	1,150	247	250	22
Rocky Mountain	3,600	3,800	25,600	4,100	633	522	...	...	5
California	48,400	45,500	304,500	39,700	1,334	1,346	Not available		3
U. S. totals	143,200	139,300	997,100	131,000	20,044	27,202	2,720	3,814	1,107
Daily average	4,620	4,640	4,680	4,230	...	...	...	...	...

The indicated output of motor fuel from the above and other sources may be expressed by the following table:—

	Thousands of gallons—July, 1928.	June, 1928.	Jan.-July, 1928.	July, 1927.
Gasoline produced at refineries* †	1,381,100	1,288,400	8,719,900	1,181,000
Natural gasoline blended at plants east of California	2,700	2,600	17,900	3,200
Natural gasoline sold direct to jobbers‡	2,100	2,100	14,700	800
Benzol production‡	9,600	9,700	67,500	9,000
Total motor fuel produced	1,395,500	1,302,800	8,820,000	1,194,000
Daily average	45,020	43,430	41,410	38,520
* Includes natural gasoline blended at refineries	111,500	108,900	774,800	99,400
† Includes natural gasoline run through refinery pipe lines in California	6,200	5,700	52,400	11,600

‡ Estimated.

N. P. A. Will Meet at Atlantic City Sept. 19

The tentative program of the annual meeting of the National Petroleum Association, September 19 to 21, at the Hotel Traymore, Atlantic City, follows:—

September 19

10 a. m.—Meeting of trustees.

2 p. m.—First general session.
Report of the president, E. M. Lyons.
Report of treasurer.
Message from Judge Chamberlin.
Report of Department of Manufacture, P. S. Tarbox.
Address, "The Refinery Heat Machine, Old and New," H. A. Ross.
Address, "Pipe Stills," G. D. Brandt.
Round table discussion of manufacturing problems, led by H. S. Bell and five other speakers as follows:—L. C. Jamieson, on "Cold Settling"; G. D. Brandt, on "Vacuum Distillation"; D. W. Hovey, on "Modern Distillation"; MacLean Houston, on "Maintaining Production"; J. B. Northrup, on "Filter House Practice."
Address, "Developments and Possible Future Developments of the Internal Combustion Motor," Dr. Mougey, chief chemist for the research laboratory of the General Motors Corporation.

September 20

10 a. m.—Group meeting of the Department of Manufacture dealing with cooperative engineering work of the association. Discussion led by Howard H. Greene, O. P. Keeney, G. C. Davison.

2 p. m.—Address, "Burning History," by Houston Dunn.
Address on the work of the N.P.A. Fire Marshal's Association, by James H. Herbert.
Address, "What Oil Heating Means to the American Home and to the Oil Industry," E. Earl Newsom, assistant director of the Oil Heating Institute.
Address, "Facts Significant in the Profitable Management of Petroleum Refining and Marketing," H. W. Ralph.

September 21

10 a. m.—Report on "What the Association Is Doing in the Traffic Field," Willis Crane.
Report for the Department of Standards and Tests, A. W. Scott.
Report of the Association's Statistical Service.
Address, "Price of Prosperity in Petroleum Industry," Dr. Joseph E. Pogue.
Report on the Washington office, Fayette B. Dow.

Oil Course at N. Y. U.

The usual evening course on "Petroleum Production Problems" will be given this season at the Wall Street branch of New York University, 90 Trinity place, by Dr. Ernest R. Lilley, commencing September 24, and ending May 13. The course will be given every Monday from 5:15 p. m. to 7 p. m. The subjects include exploration technic, development and production technic, crude oil marketing, problems of individual areas, crude oil valuation, over-production problems, conservation and stabilization movements, and property valuation and financing.

The General Petroleum Corporation has acquired leases on 39,000 acres in King and Tulars counties, California, and will start an extensive drilling campaign.

Crude Petroleum Output in July

Daily Average Production Showed an Increase of 15,500 Barrels

According to reports received by the United States Bureau of Mines, from companies which operate gathering or lead lines, production of crude petroleum during July, amounted to 75,426,000 barrels. This represents a daily average of 2,433,100 barrels, an increase over the daily average output in June of 15,500 barrels. The majority of the states, including the important producing states of California and Oklahoma, reported decreased output in July but these declines were more than overbalanced by the West Texas district where the daily average output increased approximately 50,000 barrels. The various fields of the West Texas district produced an average of 365,000 barrels per day in July as compared with 262,000 barrels per day for the Seminole district.

The slow decline in crude stocks east of California was continued in July, when the total was reduced from 370,751,000 to 369,243,000 barrels, a net withdrawal of 1,508,000 barrels. Practically all of this decline was recorded in stocks of light crude held in Oklahoma.

Total stocks of all oils declined approximately 1,100,000 barrels as compared with a decrease of approximately 500,000 barrels in June. In spite of the continued heavy withdrawals from gasoline storage, total stocks of all refined oils showed a small gain in July. This resulted almost entirely from the increase in fuel oil stocks, a large part of which was diverted to unfinished oil stocks, presumably for use as cracking stock.

General Production Statistics

Production by Fields and Gravity

	July, 1928. Total.	July, 1928. Daily av'age.	June, 1928. Total.	June, 1928. Daily av'age.	Jan.-July, 1928.	Jan.-July, 1927.*
	Barrels		Barrels		Barrels	Barrels
Appalachian	2,637,000	85,100	2,564,000	85,500	17,922,000	17,625,000
Lima-Indiana	159,000	5,100	159,000	5,300	1,020,000	1,110,000
Michigan	56,000	1,800	50,000	1,700	280,000	256,000
Ill.-S. W. Ind.	632,000	20,400	628,000	20,900	4,334,000	4,561,000
Midcontinent	45,635,000	1,472,100	43,586,000	1,452,800	311,478,000	310,473,000
Gulf coast	4,085,000	131,800	3,949,000	131,700	26,104,000	31,230,000
Rocky Mountain	2,468,000	79,600	2,426,000	80,900	16,852,000	†18,584,000
California	19,754,000	637,200	19,164,000	638,800	132,715,000	135,615,000
United States totals	75,426,000	2,433,100	72,526,000	2,417,600	510,714,000	519,454,000
Light crude	67,665,000	2,182,700	64,940,000	2,164,700	455,981,000	451,950,000
Heavy crude	7,761,000	250,400	7,586,000	252,900	54,733,000	67,504,000

* Final figures. Includes approximately 2,500,000 barrels consumed on leases, etc., not included in 1928 preliminary figures. † Including Alaska.

Producing Wells Completed in United States

July, 1928.	June, 1928.	Jan.-July, 1928.	Jan.-July, 1927.
1,096	1,056	6,623	9,318

Records of Larger Producing Fields

The feature of the month, from the standpoint of flush-producing areas, was the increased output of the West Texas district. The daily average production of this area in July was 365,000 barrels, an increase of nearly 50,000 barrels over the daily average of the previous month. The cause of this increase was the same as in previous months; that is, the unusually high total initial production of the completed wells. These wells were "pinched in" on the basis of the transportation facilities available. The decline at Seminole was continued in July, when that district produced at the rate of 262,000 barrels per day. Nothing of particular interest developed at Seal Beach or in the Panhandle. The Long Beach field reported 30 completions, with a total daily initial output of 42,000 barrels, but this was scarcely sufficient to compensate for the decline of the older wells.

Stocks of crude petroleum held in the Seminole field on July 31 amounted to 17,389,000 barrels as against 17,995,000 barrels held there on July 1. This decrease represented a large part of the July decrease in the national total of all oils. Detailed figures follow:—

Production and Gravity

	July, 1928. Total.	July, 1928. Daily av'age.	June, 1928. Total.	June, 1928. Daily av'age.	July, 1927. Total.	July, 1927. Daily av'age.	Av'age grav.
	Barrels		Barrels		Barrels		
Seminole	8,121,000	262,000	8,298,000	277,000	14,720,000	475,000	41.0
Panhandle	1,974,000	64,000	1,960,000	66,000	3,460,000	112,000	36.0
West Texas	11,314,000	365,000	9,483,000	316,000	4,040,000	130,000	...
Seal Beach	1,047,000	34,000	1,105,000	37,000	1,791,000	58,000	24.0
Long Beach	6,078,000	196,000	5,831,000	194,000	2,868,000	93,000	26.0

Stocks at Seminole

	July, 1928.	June, 1928.	July, 1927.
	Barrels	Barrels	Barrels
Producers' stocks	371,000	364,000	380,000
Tank-farm stocks	17,018,000	17,631,000	9,565,000
Total stocks	17,389,000	17,995,000	9,945,000

Record of Wells for July

	Completions: Oil.	Gas.	Dry.	Total initial production.	Av'age initial production.	Drilling July 31.
				Barrels	Barrels	
Seminole	34	2	10	22,000	600	90
Panhandle	19	9	7	2,500	100	131
West Texas	99	3	37	745,000	7,500	387
Seal Beach	1	..	1	1,400	1,400	3
Long Beach	30	..	2	42,000	1,400	169

Foreign and Domestic Shipments

Imports and Exports

	July, 1928. Total.	July, 1928. Daily av'age.	June, 1928. Total.	June, 1928. Daily av'age.	Jan.-July, 1928.	Jan.-July, 1927.
	Barrels		Barrels		Barrels	Barrels
Imports	7,878,000	254,100	6,553,000	218,400	45,884,000	30,818,000
Exports	1,669,000	53,800	1,879,000	62,600	10,343,000	8,628,000

California Oil Through Panama Canal to Eastern Ports in United States

	July, 1928.	June, 1928.	Jan.-July, 1928.	Jan.-July, 1927.
	Barrels	Barrels	Barrels	Barrels
Crude oil	242,000	182,000	1,891,000	5,967,000
Refined products	2,206,000	1,672,000	11,526,000	13,781,000
Gasoline	1,745,000	1,589,000	9,034,000	6,503,000
Gas oil	362,000	.....	1,444,000	2,261,000
Fuel oil	2,000	80,000	711,000	4,865,000
Lubricants	1,000	.....	227,000	145,000
Tops	95,000	.....	95,000	.....
Asphalt	1,000	3,000	15,000	7,000

Berry V. Stoll, of the Stoll Oil & Refining Company, Louisville, is back at his office after a couple of weeks spent at Asheville.

By completing a 30,000,000 cubic foot gas well, the Houston Oil Company has extended the new Albercas field, Webb county, Texas, one mile to the south.

The H. F. Wilcox Oil & Gas Company and the Amerada Corporation will drill a joint test well in Edwards county, Kansas, going to 5,000 feet if necessary.

Explosion of gasoline vapor in two storage tanks of the George C. Peterson Company, oil distributor, Chicago, September 2, resulted in the death of George Schar, superintendent of the plant, who was pumping gasoline from tankcars into storage. A short circuit is said to have caused a spark, igniting the vapors. The plant was but slightly damaged.

Legislation designed to bring about the "open door nationalization" of the petroleum resources of Colombia is advocated by the Minister of Industry, who will submit a bill to the Senate. Meanwhile, active steps are being taken to prevent illicit prospecting on areas covered by petroleum concessions recently canceled.

The Roxana Petroleum Corporation has secured large acreage on a structure in Reno county, Oklahoma, and will drill a test well.

The Iroquois Electric Refrigeration Company, subsidiary of the General Asphalt Company, will terminate its business December 31, 1928, and will dispose of its electric refrigeration activities and other assets in that line.

George S. Allee, president of the Missouri Oil Men's Association, states that a record breaking attendance is expected for the Big Four State Jobbers' meeting at the President Hotel, Kansas City, October 3 to 5. Four states, Missouri, Kansas, Nebraska and Iowa, will be represented by 1,000 jobbers.

The Shell Company of California has applied to the Los Angeles Board of Supervisors for a 40-year franchise for three pipe lines, one 16-inch line for gas only, one 10-inch line for oil only, and one 6-inch line for gasoline only, from Redondo Beach and the City of Torrance to the harbor district.

The motorship "Panoil", of the Pan American Petroleum & Transport Company, left Boston August 22 for Toronto with 546,000 gallons of crude petroleum, via the Gulf of St. Lawrence, St. Lawrence River, Lachine Canal and Lake Ontario. The craft will be used for carrying bulk products from Toronto to Buffalo for the next few months.

Governor Emerson of Wyoming has appointed Robert Grieve, Oil City, Wyo., to succeed J. E. Scott, resigned, as a member of the Natrona county board of commissioners. M. E. Robertson succeeds Earle Burwell, and D. L. DaBrecha succeeds Earl Holmes. This gives Natrona county an entire new board and ends a long drawn out squabble.

The White Eagle Oil & Refining Company, Kansas City, plans to resume operations at its Fort Worth, Texas, refinery. This plant, of 4,000 barrels capacity, has been shut down a year because of unfavorable market conditions.

O. W. Killiam's Well No. 1 Cueller in the Cerrito Blanco grant, Zapata county, Texas, in the Jennings gas district, is believed to have opened a new oil field. At 1,465 feet on drill stem test with valve opened, about 300 feet of oil showed. This well is 3 miles northeast of the old Jennings gas field and 6 miles southwest of the original Mirando Valley field.

A project involving the construction of a 300-mile 20-inch gas pipe line at an estimated cost of $20,000,000 from the Hiawatha Dome gas field in southern Wyoming to supply natural gas to Salt Lake City and Ogden, Utah, and towns en route, is being sponsored by the Ohio Oil Company, the Prairie Oil & Gas Company, and the George W. Crawford gas interests.

The National Petroleum Association has filed a complaint with the Interstate Commerce Commission attacking the freight rates on fuller's earth, used in refining, shipped from producing points in Georgia and Florida to destinations in Pennsylvania, New York, West Virginia, Ohio, and Illinois. Reductions and the establishment of joint through rates are sought.

STORAGE TANKS

NEW AND SECOND HAND

Prompt Shipment

Shippers' Car Line Corporation

30 Church Street, N. Y.

Works: Milton, Pa.

YOUR RELIABLE FIRM OFFERS FOR SALE

KETTLES & MIXERS

2— 20 gal. "Wear-Ever" Aluminum Kettles.
3— 30 gal. Jacketed Copper Kettles.
7— 60 gal. Jacketed Copper Kettles.
3— 250 gal. Jacketed Copper Kettles.
150—"Wear-Ever" Aluminum Jacketed Kettles, 40 and 80 gals. capacity.
2— 20 gal. Experimental Mixers.
2— 60 gal. Day Mixers.
3— 100 gal. Jacketed Mixer Kettles.
2— 150 gal. Jacketed Vallelron Mixers.
1— 500 gal. C. I. Sulphonator.
2— 900 gal. Horizontal Steel Mixers.
5—1500 gal. C. I. Reduction Kettles.
3—1600 gal. Jacketed Nitrators.

DISTILLING APPARATUS

1— 50 gal. Jacketed Copper Still.
2— 75 gal. Jacketed Copper Stills.
1—150 gal. Jacketed Copper Still.
1—300 gal. Copper Still.
2—400 gal. Copper Stills.
4—115 gal. Aluminum Jacketed Stills.
1—150 gal. Enamelled Still.
6—Copper Columns, 15 in., 18 in., 24 in., Diam.
5—Duplegmators, 15 in., 18 in., 24 in. Diam.
9—Condensers, Assorted.

FILTERS

1—36 in. Shriver C. I. Filter Press.
1—30 in. Sperry C. I. Filter Press.
1—30 in. Shriver-Atkin C. I. Press.
4—30 in. sq. Wooden Filter Presses.
5—24 in. sq. Wooden Filter Presses.
2—24 in. sq. Cast Iron Filter Presses.
3—18 in. sq. Wooden Filter Presses.
20—30 in. Filter Press Skeletons.
2—Kiefer Multiple Filters.

EVAPORATORS

1—Devine Vacuum Evaporator.
4—Jacketed Evaporating Pans, 7 ft. x 30 in.
2—Evaporating Pans, 8 x 3 ft.
2—Zaremba Evaporators, 5 ft. diam.

VACUUM PUMPS

20—Beach Russ Rotary Vacuums.
8—Devine, 4 x 6 in. and 6 x 8; Belted.
1—Stokes, 2-stage, 6 x 3 in.
1—Devine, 5 x 10 x 8.
1—Blaisdell, 14 x 10 in.; Belted.
1—Alberger, 8 x 16 x 10.

MISCELLANEOUS

5—Abbe Mills, 24 x 30 in.; 4 ft. x 5 ft.
1—Allis-Chalmers Rotary Hammermill.
1—Jeffrey Spike Roll Coal Crusher.
1—Gruendler Crusher.
4—Lehman Bean Roasters.
1—150 gal. Jacketed Autoclave.
3—Grinnell Dryers, NEW.
8—Centrifugal Extractors, 12 in. to 40 in.
2—Laundry Ironers; Gas-Electric.

Send us your inquiries

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One of America's Foremost Organizations Seeks a Sales Executive

The man we require is described as being; present employed, between 30 and 35 years of age, with field sales and sales administrative experience.

Preferably a graduate chemist or chemical engineer.

Capable of selecting, training and directing salesmen and field engineers. Experience in paint or chemical trade is desirable.

All applications will be held in strict confidence.

Address Box 928, care of this paper.

Machinery For Sale

1—24 in. x 24 in. Sperry Filter Press.
2—Abbe 4 ft. x 5 ft. Pebble Mills.
2—100 gallon Abbe Pebble Mills.
3—16 in. x 40 in. 3—Steel Roller Ink and Paint Mills.
1—Ross 40 gallon Mammouth Pony Change Can Mixer.
5—2000 gallon Storage Mixing Tanks.
28—20 in. Kent Stone Paint Mills.
3—30 in. Day Stone Paint Mills.

We are large buyers of used equipment—what have you to offer?

IRVING BARCAN COMPANY

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Excellent Used Equipment

CENTRIFUGALS (Extractors)

12—20, 26, 30, 36, 48, 54 and 60" Tolhurst, Troy, Fletcher makes.

DISTILLING EQUIPMENT

10—Copper Columns, 12 to 60" dia.
Lummus 32" sq. Copper.
3—Lummus Stills, 300, 750 and 1,000 gals.
5—Tubular Conds., Copper, 50 to 1,200 sq. ft.

COMPRESSORS

1—Curtis Vert. Duplex 8x8".
1—Chicago Pneumatic, Horiz. 6x6".

DRYERS—KILNS

1—Proctor Automatic Conveyor Dryer.
4—Proctor Atmos. Dryers, 2, 4 and 6 trucks.
9—Devine, Nos. 11, 23 and 32 (vac. shelf).
2—Stokes 2' 6"x8' and 3x15' Rotary vac.
2—Bonnot, 6x60'. Rotary Kilns.
1—Bartlett & Snow, 3x25' Rotary Dryer.

EVAPORATORS AND PANS

2—Zaremba and Scott, single effects.
3—40, 75 and 150 gal. Copper Vac. Pans.

FILTER PRESSES

8—Iron, 12, 18, 24, 30, 36 and 42 in.
6—Wood, 24, 30, 32, 36 and 42 in.
4—Kelly, No. 150, 250 and 450.
7—Sweetlands, Nos. 2, 5, 10, 11 and 12.
4—Oliver, 6'x4', 8'x6', 8'x12'.

GRINDERS AND PULVERIZERS

6—Raymond, Nos. 1, 0, 00 and 0000.
4—Shutz-O'Neill, 16, 20, 22 and 28 in.
3—Williams Grinders and Crushers.

PAINT AND INK MILLS

5—Day, Kent and Rose, 9"x28", 12"x30" and 16"x40".
8—12, 18, 20, 24 and 36" Iron and Stone Mills.
6—Pebble and Jar Mills, Abbe Engineering and Paterson make.

KETTLES

9—Jack, open and closed, 50 to 1,000 gals.
8—Copper Kettles, 20 to 150 gals.
4—Pfaudler Enam., 1,000 to 3,000 gals.

MIXERS

5—W. & P. Jack and Plain, 50 to 300 gals.
4—Dough Mixers, 1 to 5 bbls.
3—Pony and Change Can Mixers, 8 to 40 gals.
7—Day, sizes A, B, C, D and F.

PUMPS

20—Rotary Centrif. and Piston (Std. Makes).
3—16x20x36", 11x18x20", Amer. Marsh Vacuum (dry).
4—Devine and Buffalo Horiz. Vacuum.

TANKS (Wood, Steel and Copper)

20—500 to 20,000 gals. capacity.
3—1,400 gal. copper (closed).

MISCELLANEOUS

Crocks: Lead Lined Equipment: Generators; Engines; FW Heaters; Hoists; Rails; Locomotives; Boilers, Coal and Gas; Condensers.

SPECIAL

1—Devine 3x9' Double Drum Bronze Vacuum Dryer.
1—6' dia. Buffalo Vac. Crystallizer.

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Agencies Wanted

I SELL for several small chemical manufacturers but employ only part of my time. I can serve additional manufacturer or producer non-conflicting products in east. Maintain New York office. Address BOX 897, care of this paper.

WELL-KNOWN, old established English firm of chemical merchants, with ramifications throughout Europe, are desirous of obtaining the selling agency of a first-class American firm of chemical manufacturers. Address in the first place to BOX 900, care of this paper.

IF YOU can offer to advantage raw materials used in various industries, and would be interested in a selling connection for southern Ohio, address BOX 931, care of this paper.

BROKERAGE WANTED on heavy chemicals to sell in middle west, to sell in competition with local manufacturers. Address BOX 932, care of this paper.

SALES AGENCY wanted — Well financed organization covering paint, varnish, lacquer, leather, chemical and drug manufacturers in metropolitan district. Is in position to take on additional lines, operate own warehouse, railroad siding equipped to package merchandise direct from tank cars or from own storage tanks. Address BOX 939, care of this paper.

Equipment Offered

FOR SALE.—Bottle fillers, crown cork capping machines, labelling machines, filters, centrifugal and rotary pumps. Also DeLaval and Sharples clarifiers, copper and aluminum stills, copper, aluminum and iron kettles, gas and coal steam boilers, copper columns, dephlegmators and condensers. Machinery and Equipment Co., 225 Sherman avenue, Newark, N. J.

ABBE PEBBLE MILLS: Two 4-ft. by 5-ft.; two 80-gallon liquid interchangeable mixers; three pair of 50-gallon paste mixers; five 16 by 40 roller paint mills. Irving Barcan Co., 30 Church street, New York, N. Y. Telephone Cortlandt 2195.

MIXERS—One 100-gal. jacketed W. & P. mixer; one 250-gal. unjacketed W. & P. mixer; one 600-lb. De Laval clarifier; one Shriver lead 18 x 18 filter press; one Duriron steam jacketed kettle, 300 gals.; two 400-gal. copper, steam jacketed agitated kettles; two Rogers motor driven powder filling machines; one Colton combination tube filler, closer and clipper. Address BOX 910, care of this paper.

MILLS WATER cooler, 20 inches, 24 inches, 30 inches; Day, Kent, Ross, K. & H. also mixers. Tanks steel and galvanized iron. Steel varnish kettles and trucks, pumps. Also other equipment in good condition due to building and concentrating our factories. Location middle west. Also plant for sale. Let us have your inquiries. Address BOX 921, care of this paper.

FOR SALE: 15x30 W. C. three roll iron mill; 11x22 and 17x31 stone three roll mills; 18 in. iron paint mills; gang of 4—12 in. W. C. iron paint mills; 16 in., 30 in. and 42 in. stone dry mills; 24 in. disintegrator; 24 in. Coggeswell mill; 6 ft. putty chaser; 21 in. laboratory chaser, shaking sieves, etc. P. F. Campbell, 55 Laurel street, Phila., Pa.

CAPSULE PLANT: Cogswell and Mead mills; Lummus 8 in. fractionating column unit; two 300 gals. copper and two 300 gals. C. I. jktd. kettles; Day "B" sifter and mixer; Day 35 gal. dble. arm mixer; 8 in. soap plodder; dryers, filter presses, centrifugals; grinders, etc. Chemical Machinery Co., 405 East 15th street, New York City. Stuyvesant 8139.

FOR SALE: One 20, two 30 stone paint mills; nine 18 water cooled iron paint mills, one wrapping and sealing machine in fine condition. William Brady, 9615 134th avenue, Ozone Park, New York. Telephone 7275 Virginia.

Equipment Wanted

FOR CHEMICAL plant, filter presses, dryers, pulverizers, stills and miscellaneous equipment. Give particulars and price in letter. Address BOX 912, care of this paper.

COPPER STILLS and kettles, 25 to 400 gals.; cast-iron filter presses; storage tanks, 2,000 to 20,000 gals.; autoclaves, 1 to 10 gals. Address BOX 913, care of this paper.

Formulas Wanted

INDUSTRIAL FORMULAS wanted for the manufacturing of items whereas expensive machinery is not necessary. High prices paid to anyone having anything bona fide to sell. Address Manuel, P. O. Box 1686, Havana, Cuba.

For Rent

FACTORY, four-story, 20,000 feet, steam and sprinklered. Also fully equipped dryer and bleachery; plenty of running water; two railroads, Hudson River boats, spur on premises. Rent reasonable. Eli Berman Co., Inc., Main and East Main streets, Beacon, N. Y.

Materials Offered

LINOLEATE - MANGANESE — True linoleate made from pure linseed oil only, completely dehydrated. "Every pound the same." Made and sold by the Pantasote Leather Co., Passaic, N. J.

FOR SALE: Two hundred bbl. fish stearine, 5½c. per lb. f.o.b. New York. Address BOX 927, care of this paper.

Materials Wanted

WANTED to purchase, odd lots of filter cel. Send samples and prices to International Products Corp., Trenton, N. J.

Positions Vacant

PRINTING INK SALESMAN—We are looking for a live, aggressive salesman, with a following. We have to offer a well established, fast growing company, who will give a salesman an opportunity to make real money, on a commission and overage basis. Correspondence will be held in strict confidence. Address BOX 893, care of this paper.

MAN WANTED to tint colors in lacquer plant. Good opportunity for right man. Address BOX 929, care of this paper.

ADVERTISING and sales director wanted by southern manufacturer of proprietary patent. Have been in business several years, have plenty of capital, and a wonderfully repeating product. Must be experienced in advertising and sales promotion. Give complete information in first letter, including age, salary expected and full experience. Wonderful opportunity for right man. Address BOX 930, care of this paper.

THE GREENDALE COMPANY, Lawrenceburg, Indiana, distillers of the finest grain alcohol in this country, has openings in all large cities for sales representatives to call on druggists, doctors, hospitals and institutions. Earning capacity limited only by applicant's energy. Permanent connection with unusual possibilities. Apply by letter stating all details as to experience.

UNUSUAL OPPORTUNITY—Varnish and lacquer chemist or superintendent required for technical sales. Applicant should have wide experience in the production of all types varnish and some knowledge of lacquer, and should be willing to travel. Liberal salary and permanent position with firm of good standing. Apply with full particulars. Address BOX 936, care of this paper.

YOUNG MAN with some paint manufacturing or laboratory experience and knowledge of earth pigments, wanted to sell dry colors on a salary basis. Answer in detail, stating qualifications, etc. Correspondence will be kept confidential. Address BOX 935, care of this paper.

Positions Wanted

PHARMACEUTICAL CHEMIST, college graduate, desires position with concern manufacturing patent medicines, perfumes, or non-alcoholic cordials. Address BOX 926, care of this paper.

SALESMAN-CHEMIST, desires position either inside or outside in technical sales or service capacity. Experience includes research, plant and sales work. Acquainted in many industries in Metropolitan district. Address BOX 937, care of this paper.

Positions Wanted

PAINT CHEMIST—For several years connected with the paint and varnish industry. Knows thoroughly the requirements of New York trade. Desires connection with progressive paint house. Address BOX 938, care of this paper.

PAINT TECHNOLOGIST, formerly chief chemist and assistant superintendent nationally known New Jersey manufacturer with wide experience, in practical paint varnish and lacquer making, research and development work, open for connection with responsible company. References A1. At liberty October 1st. Address BOX 933, care of this paper.

Processes Offered

WE OFFER manufacturing rights under Welter spray tower patents applicable for large volume economical production of free-running, non-caking powders. Markedly lower costs, cheaper than ordinary mixtures. Particularly adapted to combinations of dry with liquid commodities, recreating new definite single crystallin product. No dust, clean working conditions. Simple and accurate control; very low maintenance. Will consider exclusive license to responsible firms in their respective field. Gold-Par, Produce Exchange Building, New York.

Services Offered

WHEN YOU need help on lacquers, when you want to duplicate or to improve a formula, when you need a new lacquer for a specific purpose, address BOX 911, care of this paper.

CONSULTING CHEMIST—High grade thoroughly experienced with proven record of accomplishments invites problems on paint, varnish and lacquer formulation, factory management and paint control. Whole or part time. Address BOX 934, care of this paper.

TRIBAL OSAGE OIL LEASES AT PUBLIC AUCTION.
SEPTEMBER 27, 1928,
BY UNITED STATES GOVERNMENT.

September 27, 1928, at Pawhuska, Oklahoma, about 20,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25 percent payable on day of sale, balance in three annual instalments, with acceptable security. Within advertised area there are about 9,875 wells producing from one barrel to 400 barrels each, the total daily production for June, 1927, being about 53,000 barrels; also, there are about 40 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

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Buy under our definite *Rebuilding Policy*,—wherein every item of machinery leaving our shops at Newark, N. J., is thoroughly overhauled and rebuilt—"not just covered with a coat of paint."

LIQUIDATIONS

We are now Liquidating The Pickering Chemical Company at Nitro, W. Va., the Tiverton, R. I. plant of The Petroleum Chemical Corporation and the Wayne Wood Products Company, Collinswood, Tenn.

Special Items

4—Truscon Steel Buildings.
50—Storage Tanks, all sizes from 500 gallons to 15,000 gallons.
2—Ames HRT Boilers, 150-lb. ASME Mass. Standard.
2—Devine 5 x 33 ft. Rotary Vacuum Dryers, complete.
MISCELLANEOUS—Air Compressors, Pumps, Kettles, Dryers, Mixers, Grinders.

SEND FOR COMPLETE LISTS

In Stock Ready for Immediate Shipment

AUTOCLAVES
2—250-gallon Jacketed, Agitated.

DRYERS
1—Proctor Tunnel Dryer.
4—Proctor and Gordon, tray and truck.
11—Vacuum Shelf, Nos. 27, 23, 12, 11.
6—Rotary Vacuum, 3 x 15′ to 5 x 33′.
6—Drum Dryers, single and double, Atmospheric.

EVAPORATORS
8—Single, Double, Triple, Quadruple Effects; Swenson, Scott, Stokes.

CENTRIFUGALS
Copper and Steel Baskets
3—60″ Tolhurst. 30″ Troy.
4—48″ Tolhurst. 24″ Troy.
2—40″ Tolhurst. 20″ American

FILTER PRESSES
17—Shriver, Johnson, Sperry, 12″ x 12″ to 42″ x 42″.
12—Sweetland, Nos. 12, 11, 10, 5, 2.
8—Oliver, 3 x 2, 6 x 4, 6 x 6.

W. & P. MIXERS
1—Size 12, Jacketed, 20 gal.
1—Size 14, Jacketed, 50 gal.
2—Size 17, Jacketed, 200 gal.
1—Size 18, Jacketed, 240 gal.
1—Unjacketed, 450 gallons.
2—Unjacketed, 950 gallons.
1—Size 30, Jacketed, 2300 gal.

MIXERS
6—5000 gallons, Vertical, coils.
2—Day Jumbo, 500 to 1000 gals.
15—Dough, Single and Double Blades, jack., unjack., 20 to 500 gals.
14—Sizes A, B, C and D, Day Sifters and Mixers.

KETTLES
All Types and Sizes
300 in stock—open top, closed, jacketed and unjacketed, with and without agitators, vertical and horizontal.
Made of Cast Iron, Steel, Copper, Aluminum, Glass Lined, Lead Lined, Duriron and Monel Metal.
Capacities from 25 gals to 20,000 gals.

DISTILLING UNITS
10—Badger and Lummus Copper Column Units, 54″, 48″, 36″, 30″, 24″ and 12″.

VACUUM PANS
10—Copper, 25 gal. to 600 gal.
2—100 gal. Aluminum Jacketed Pans.
1—6′ Copper; 1—7′ Cast Iron.

SULPHUR BURNERS
4—Glens Falls Sulphur Burners, 4′ x 16′, complete.

CRUSHING MACHINERY
Send for our new Bulletin listing Raymond Mills, Schutz-O'Neil Mills, Sturtevant, Fuller Lehigh, Ball and Pebble Mills, Hardinge Mills, Jaw and Gyratory Crushers, Tube Mills, Dryers and Kilns.

PAINT MACHINERY
2—16x40″ Motor Driven Roller Mills.
2—12x30″ Motor Driven Roller Mills.
6—Pebble Mills, 25 to 500 gals.
25—Stone Mills, 15″ to 36″, watercooled.
8—Paste Mixers, 20 to 100 gals.
2—No. 6 Sharples Motor Driven Clarifiers.
1—No. 600 De Laval Clarifier.

Send us your inquiries.

Wanted: Your surplus paint machinery. Send us your list.

CONSOLIDATED PRODUCTS COMPANY, INC.

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Industrial and Oil Securities

Market Showed Strong Upsurge in Late-Week Bull Movements—Oils Moving Forward—Call Money Rate 7½ Percent

After a number of early-week recessions in some of the leading industrials, the market Friday broke into a feverish rush of buying which carried many issues into new high ground and made up much of the losses sustained in earlier trading. The turnover for the day, 4,937,300 shares, was the second largest in the history of the New York Stock Exchange and the ticker was considerably behind the market at times. Pool operations were under way on a large scale, the market apparently discounting the unfavorable credit outlook.

The trend of the market for the week, with comparison for the previous three weeks, is illustrated by the Reporter's average price for 20 selected representative issues, as follows:—

September 7	202.19
August 31	207.31
August 24	207.99
August 17	200.42

New highs for the year were made last week by the following issues:—Air Reduction, American Linseed, Armour of Illinois "A," Calumet & Hecla Mining, Chile Copper, Columbia Gas & Electric, Commercial Solvents, Continental Can, Cudahy Packing, Davison Chemical, Eastman Kodak, Gold Dust, International Nickel, Kennecott Copper, Lambert Company, Lehn & Fink, Liquid Carbonic, Magma Copper, Pittsburgh Plate Glass, and Union Carbide & Carbon. A new low for the year was made by Neve Drug Stores.

Call money opened and renewed on the Stock Exchange Friday at 7½ percent, closing at that figure. Earlier in the week the rate had been 8 percent. The banks called about $25,000,000 during the day. The weekly Reserve statement showed an increase of $54,000,000 in brokers' loans.

Time loans held at 6½ percent for all positions. Commercial paper was quoted at 5¼ percent for prime names and 5½ to 5¾ percent for good names.

Prime bankers' acceptances eligible for purchase of rediscount at Federal Reserve banks were announced by the American Acceptance Council for discount at purchase as follows:—

	Percent Bid	Asked
30 days	4⅝	4½
60 days	4⅝	4½
90 days	4⅝	4½
120 days	4¾	4⅝
150 days	5	4⅞
180 days	5	4⅞

Call loans against acceptances, 6½ percent.

	1927 High.	1927 Low.	1928 High.	1928 Low.	Close Sept. 7.
Diamond Match	147¾	115	165	134⅝	..
Dow Chemical	99½	71	..	..	..
pfd.	107	101	170	136	..
Drug, Inc.	..	..	118	80	111
DuPont	343⅞	168	405½	310	390¼
deb.	117	105½	121½	114	115⅝
Eastman	175¼	126¼	194¼	163	184
pfd.	131½	119¼	180¼	123½	..
Forhan "A"	26	17¼	34	23	32
Gen. Am. Tank	63¾	46	79½	60⅞	79
Glidden	22	14½	30	20⅜	25⅝
prior pfd.	101	86	104⅞	95	..
Gold Dust	78¾	42	109¾	71	109
Greene Cananea	149¼	29¼	164½	89⅝	118
Hercules, pfd.	111¼	114	124	118½	..
Heyden, new	10	7¼	13	7½	..
Hires Co.	23⅞	19¼	26½	21½	..
Household Pr.	70⅜	43¼	77	64⅛	74¾
Intl. Agri.	16⅜	6⅛	20⅞	13	17⅛
prior pfd.	65	33	80½	48⅜	80
Int. Match pfd.	95½	62	121⅞	93¼	109⅝
Int. Nickel	80½	38¼	125	73⅝	124¼
Int. Salt	75	63	69	49½	..
Kenn. Copper	90⅜	60	100¼	80½	97⅞
Lambert Co.	88½	66	122⅜	79½	120½
Lehn & Fink	43	32⅜	61⅜	38	59⅜
Libby-Owens	150½	115	140	109	..
Liquid Carb.	78¾	45	78⅜	63½	77
MacA. & Forbes	58¼	43¼	57⅜	46	46¾
Magma Copper	57⅞	29½	61	43⅜	59⅜
Mathieson	131⅜	82	147	117⅜	141½
May Drug	..	..	26⅞	20	22⅛
Mead Johnson	65⅝	30⅝	72	53½	..
Miami Copper	20⅜	13⅞	22½	17⅜	22
Natl. Dist.	56¾	17	58½	29¼	42
pfd.	69¾	43	71⅜	51¼	63
Natl. Lead	135	95	136	115	124
pfd. A	139¾	131½	147¼	139	..
pfd. B	115¼	104⅞	121½	112½	..
Nevada Copper	20⅜	12⅜	27	17⅜	25⅜
N. J. Zinc	194¾	178	260	180¼	220
Neve Drug	..	..	46½	24	24½
Owens Bot.	85½	73	95⅞	74½	82
pfd.	120	115	117	114¾	..
Parke-Davis	40	27½	49⅞	38	..
Patino Mines	27½	18½	42	23⅞	34¼
People's Drug	50	20⅝	69	53	67⅛
Pitts. Pl. Glass	269	198	262	210	262
Pratt & Lam.	58½	48	61¼	51½	57
Proc & Gam.	245	178	300	247	..
Prophylactic	71	55	91	63	..
Royal Bak.	339	161	287	205	225
pfd.	108½	93¾	109½	104	..
St. Joe Lead	43⅞	36	49	37	46⅝
Schulte	57	47	67½	49⅞	60½
pfd.	123	116¼	129	118⅞	..
Sher. Wil.	..	..	74½	65¼	..
Silica Gel., ctf.	20⅜	13¼	29	17	22
Stan. Pl. Glass	4⅜	2	7⅝	2¼	3⅜
pfd.	15⅞	10	40	10	..
Swift & Co.	130	115⅝	137	125	..
Swift Intl.	28¼	18¼	34½	25⅜	33⅜
Tenn. C. & C.	14¼	8¼	16⅜	10½	14⅝
Tex. Gulf Sul.	91⅜	49	80⅝	62¼	72
Union Carbide	154½	98⅜	173½	136½	167¼
United Cigar	38½	32⅜	34⅝	22⅞	29⅝
United Dye	10	3¼	12	4	..
pfd.	49	36¼	74⅞	45⅝	..
U. S. Gypsum	100⅜	83⅞	100	55	61⅜
U. S. Ind. Al.	111⅜	69	124⅞	102½	120⅜
pfd.	119	107¼	122¾	119	..
Utah Copper	161	111	160	139	..
Vick	63⅝	48	78⅞	58	74½
Va.-Car., 6 pc. pr	48½	26⅛	55½	44⅝	53⅛
7 pc. pr.	91	73	97	88½	96
new	15½	7½	16⅜	12	15¼
Vivaudou	39¼	20¼	25⅜	11¾	15½
pfd.	118½	97	100	78	..
Wesson Oil	77	50½	85¾	67	75
pfd.	102¼	95	108	102	..
White Rock	41½	26	44⅝	34¼	38
Wilson, pfd.	84⅜	58	77⅜	66	69
Wrigley	72¾	50⅞	84	68¾	79

	1927 High.	1927 Low.	1928 High.	1928 Low.	Close Sept. 7.
Ahumada Lead	6½	2¾	5¾	2¾	3½
Air Reduction	..	..	81⅝	58	78¼
Allied Chem.	169¼	131	205	146	198
pfd.	124	120	125¾	120½	..
Allison Drug A.	22	19½	21⅞	8	..
Alum. Ltd.	..	..	130	80	..
Am. Ag. Chem.	21½	8¼	23¼	15⅝	22
pfd.	72¾	28¼	75	55⅝	73¼
Am. Can, pfd.	141⅝	126	147	136⅜	..
common	77⅝	43⅝	112¼	70½	107⅝
Am. Chicle	74¾	36	89⅜	69	87⅜
Am. Cyan. "A"	37⅞	32¼	45	39⅞	..
"B"	32½	25	53½	30⅞	36⅜
pfd.	98	84	101	95	..
A. D. S.	15½	9⅝	15½	11	12
Am. Home Prod.	71	30⅜	81⅜	59	..
Am. Linseed	72½	20¼	135	56⅜	125¼
pfd.	92½	46⅜	130⅛	86½	..
Am. Metals	49⅜	36⅛	51	39	47⅞
pfd.	113½	108	117½	111½	113
Am. Smelting	188⅝	132⅝	252¼	169	240⅜
pfd.	132½	119¼	142	131	..
Am. Sol. Chm., pf	29	11	41⅞	25¼	..
common	13½	6	28¼	11⅜	21
Am. Zinc.	10¼	5⅜	32⅝	6⅜	31½
pfd.	51¾	35	98	40	90¼
Anaconda	60½	41⅜	77	53⅜	75½
Anglo-C. Nitrate	31½	14	54	26½	43½
Archer-Dan.	63	38	97	54½	77½
pfd.	112⅜	106	115¼	86⅜	..
Armour, Del., pf.	98¼	79	97½	86⅜	95
Armour, Ill., A.	15⅞	9¼	23½	11¼	22⅛
Armour, Ill., B.	9¼	5	13½	6⅜	11
pfd.	86¼	60	91½	67½	88½
Atlas Powder	70	56½	101	63	82
pfd.	107	98	109	102½	..
Beech-Nut	74¼	50¼	83½	70⅜	..
Bon Ami	68½	53⅛	78⅜	65¼	73¼
Borden	169	101	187	153	166
Butte C. & Z.	5¼	3⅜	10	4⅛	9⅜
Butte & Sup.	11⅜	7⅜	16⅜	9	10½
By-Prod. Coke	92½	66	80¼	65	78
Calla. L. & Z.	2⅝	1¼	5⅜	1⅜	2⅞
Callu. & Ariz.	123½	61½	120¼	89	102⅜
Callu. & Hecla	24⅜	14½	33⅞	20¼	31⅝
Can. Ind. Al.	43½	22	50⅜	36¼	44½
Celluloid Corp.	117	44	122	91⅝	..
pfd.	91¼	82½	97¼	89	..
Cerro de Pasco	71½	58	82⅞	61½	80
Certainteed	55⅜	42	63½	40⅜	45
1st pfd.	118⅜	106	120	119	..
Certo Corp.	80	46	79½	71	..
Chile Copper	44⅜	33⅛	52¼	37⅝	48½
Coca-Cola	131	96½	177⅜	127	174
Col.-Palm.-Peet	..	..	123⅞	35⅝	90
Col. G. & E.	98¾	82⅞	125⅛	89½	122¾
pfd.	109⅝	99½	110⅛	106	107
Colum. Carbon	100⅜	66⅞	98¾	79	96¾
Com. Sol.	202	152	192½	137⅞	191⅜
Cont. Can.	86⅞	58⅜	128⅞	80¼	123¼
pfd.	126	120	128	123	..
Corn Prod.	68	46⅞	85⅝	64⅜	84
pfd.	142¼	128	146⅜	138½	..
Coty, Inc.	122½	56	205	128	..
Cudahy	58¾	43½	78	54	75⅝
Davison	48½	26¼	59¾	34⅜	56⅜
Devoe, Ray	42⅜	36½	61	40	53⅜
1st pfd.	114½	101	120	108	..

	1927 High.	1927 Low.	1928 High.	1928 Low.	Close Sept. 7.
Cum. P. L.	137	80	114	88	..
Eureka P. L.	68	47	88	64½	..
Freeport-Tex.	105½	34	109¼	55	62
Galena	13½	3½	13	4⅛	..
Gen. Asphalt.	86¼	65	94⅞	68	78
pfd.	144⅞	107¼	141½	110¼	..
Gulf Oil	118	86¼	147⅞	101⅛	134½
Houston	174⅜	60¼	167	119	144
Houston Gulf	12⅜	8½	22½	11¼	..
Humble	68½	54	84⅞	59¼	82
Illinois P. L.	182	123⅜	245	176½	232½
Imperial	64⅜	37⅜	73½	56⅜	72⅜
Indep. O. & G.	32⅜	17⅜	31⅞	21⅜	27½
Indian Refining	12⅛	7¼	39⅝	9	32⅝
Indiana P. L.	92	61	89¼	74⅝	..
Inter. Pet.	39	28¼	51¼	37	38½
Lion Oil	27½	20	32⅜	20	27½
Lone Star	59⅜	37	57	48½	53¾
Louisiana Oil	18⅛	10	19⅜	9⅜	15⅝
pfd.	97	85	94½	80	..
Maracaibo	22⅜	12	25½	12½	18
Maracaibo Exp.	22⅜	12	18¼	15⅜	..
Margay	52	12	48⅛	36½	..
Marland	58½	31	44½	33	39½
Mex. Pet.	320	200	360	250	..
Mex. Seab.	9¼	3	39	4⅝	31
Midcontinent	39⅝	26½	33¼	25½	32½
pfd.	105	97	115¼	103¼	..
Mid. State	3⅜	1⅝	7⅜	2⅜	4⅜
Mount. Prod.	29	22¾	28⅞	22⅜	22½
Nat. Supply	97⅛	76	115	87½	97
pfd.	120	114½	119	115	..
Nat. Transit	24	14¼	32⅜	19⅝	22
New Bradford	5⅞	4⅜	5½	4⅜	..
N. Cent. Tex.	12⅜	9½	13¼	10¾	12⅜
North. P. L.	100	70	125	94	..
Ohio Oil	67⅞	52	68¼	58½	62½
Oil Well Supply	44⅞	31⅛	41	20¼	25½
pfd.	110	102¾	110½	97	..
Pan-Am.	65⅞	40¼	53⅜	38¼	42
B	66⅜	40¼	54⅝	37⅜	41⅞
Pan-Am. W "B"	37⅝	16⅜	28⅜	15½	18
Pandem	9⅜	1⅝	6	2½	3
Panhandle	18⅞	2	21⅜	11½	15⅜
Pantepec	12⅛	7	15¼	8½	13½
Pennok	13½	5¼	7⅜	5½	6
Phillips Pet.	60¼	36¼	44⅝	35¼	41
Pierce Oil	1½	⅛	5¼	½	2½
pfd.	24	13½	30½	16¼	21¾
Pierce Pet.	5½	2½	6⅜	3½	4¼
Prairie Oil	55½	45⅜	56	46¼	46⅜
Prairie P. L.	190	122	223	172	..
Prod. & Ref.	33⅜	16⅜	28⅝	16	25¼
pfd.	50	36⅞	49⅝	41	..
Pure Oil	32½	23	27½	19	24
pfd.	115½	113⅜	119	108	..
Reiter-Foster	15¼	3½	12⅞	4¼	10
Richfield	28⅝	25⅜	53	23½	50⅜
Royal Dutch	54⅛	44¼	59½	44⅝	58¼
Salt Creek Prod.	35½	27¼	35	26¼	26⅜
Shell Union	31⅜	25⅜	31	23¼	27
Simms Pet.	26⅜	14¼	25¼	18¼	21⅜
Sinclair	22⅜	15	30⅜	17⅜	27⅝
pfd.	104½	97	109½	102½	..
Skelly Oil	37⅝	24⅛	34	25	32½
Solar Ref.	201½	180	186	167	..
South Penn.	41½	34½	53	26¾	49⅝
South P. L.	26½	15½	35⅞	12	..
S. W. Pa. P. L.	86	70	102	70	..
S. O. Cal.	60¾	50⅜	63⅞	53	59½
S. O. Ind.	81½	64⅜	82⅝	70⅞	77½
S. O. Kan.	20⅞	14⅝	27¼	15	22
S. O. Ky.	130	114¾	136½	122¼	127½
S. O. Neb.	49¼	40	45¼	39⅞	..
S. O. N. J.	41⅜	35½	49	37⅜	45⅜
S. O. N. Y.	34½	29⅜	41½	28⅜	36¼
S. O. Ohio	87⅛	73	84¾	71	83⅜
pfd.	122	117¼	125	117	119
Sun Oil	34⅞	30	59½	31½	57
pfd.	101⅝	99	110	100	..
Superior	6½	3¼	9½	2½	7
Swan & F.	21	14½	23½	16	..
T. & P. C. & O.	18⅞	12	17½	12⅛	14¼
Texas Corp.	58	45	70⅞	50	68¾
Tidal Osage	26½	17	22⅞	13	19
Tidewater	29¼	19	29½	19⅝	29½
pfd.	89¾	85	94½	87	90½
Tide W. Asso.	19½	15⅜	25	14⅜	25
pfd.	90⅜	85	90	81⅞	90
Transcont.	10⅜	3⅜	10¼	6⅜	8
pfd.	30	6⅜	90	82½	..
Union Calif.	56⅛	39⅝	57	42⅜	51⅜
Union Tank	127⅞	94	128½	113⅜	115
Vacuum	99⅝	95¼	136⅜	72	81
Venez. Pet.	7⅜	4⅛	6⅝	4⅞	4⅞
White Eagle	27½	20⅜	26⅞	20¼	26¼
Woodley	8	4¾	8¼	5¾	..

• Bid.

Oil Securities

Petroleum stocks participated in the general upward movement to a considerable extent last week, and talk of "an oil market" was again revived by the activity in some stocks. The general public, however, was apparently still skeptical regarding the position of the oils, notwithstanding the substantial improvements in the statistical position of the market during recent weeks.

The trend of the market for the week, with comparison for the previous three weeks, is illustrated by the Reporter's average price for 20 selected representative oils, as follows:—

September 7	59.81
August 31	53.85
August 24	57.55
August 17	52.58

New highs for the year were made last week by the following issues:—Atlantic, Gulf and West Indies, preferred; Barnsdall "A," Imperial Oil, North Central Texas, Royal Dutch, Standard Oil of Ohio, Sun Oil, Texas Corporation, Tide Water Oil, Tide Water Associated Oil, and White Eagle Oil. Carib Syndicate went into new low ground for the year.

	1927 High.	1927 Low.	1928 High.	1928 Low.	Close Sept. 7.
Amerada	37⅝	27⅝	38	27½	31¾
Am. Maracaibo	7¼	2¾	6⅝	3⅛	4½
Anglo- Am.	21⅜	17⅞	22⅜	17	17⅜
A. G. W. I.	43½	30⅜	59⅞	37¼	53⅜
pfd.	41¼	29¾	58⅞	38	58⅞
Atl. Ref.	131⅝	104	171½	95¾	167⅝
pfd.	119	115½	118¼	116	..
Barnsdall, A.	35½	20⅞	32½	20	32⅞
Beacon Oil	18¼	14	20¼	12¼	17¼
Borne-Scrim.	69	50	56	48⅝	..
British-Am.	40	29½	40	22¾	..
Buckeye P. L.	60	45	76	58	63
Cal. Pete.	32⅞	20	32¾	24	..
Carib. Syn.	26	14⅜	23⅞	13	13¼
Chesebrough	126	76½	161	117¼	..
Cities Service	58⅜	40¾	71¼	54	67⅜
pfd.	85⅜	87½	103½	94½	99½
pfd. "B"	87⅞	75⅝	95⅜	87⅞	..
Colombia Syn.	3⅞	1⅜	2¼	1¼	1¼
Cons. Royalty	9¾	6⅜	7½	6⅜	..
Cont. v.t.c.	22⅝	16½	23	13	17¼
Creole Pet.	14⅞	9⅝	17⅜	10¼	12½
Crown Cent.	3	.50	3¼	.76	1¾

Dividends Reported Since Last Week's Issue

Stock.	Class.	Amount.	Payable.	Of Record.
American Car & Foundry	Com.	Q. $1.50	Oct. 1	Sept. 14
American Car & Foundry	Pfd.	Q. $1.75	Oct. 1	Sept. 14
American Cyanamid	"A"	Q. 30c.	Oct. 1	Sept. 15
American Cyanamid	"A"	Ext. 10c.	Oct. 1	Sept. 15
American Cyanamid	"B"	Q. 30c.	Oct. 1	Sept. 15
American Cyanamid	"B"	Ext. 10c.	Oct. 1	Sept. 15
American Cyanamid	Pfd.	Q. $1.50	Oct. 1	Sept. 15
Associated Oil	Com.	Q. 50c.	Sept. 29	Sept. 17
Borne-Scrymser	Com.	S. A. $1.00	Oct. 15	Sept. 21
Borne-Scrymser	Com.	Ext. 50c.	Oct. 15	Sept. 21
Butte & Superior Mining	Com.	Q. 50c.	Sept. 29	Sept. 14
Certain-teed Products	Com.	Q. $1.00	Oct. 1	Sept. 17
Certain-teed Products	Pfd.	Q. $1.75	Oct. 1	Sept. 17
Consolidated Dairy Prod	Com.	Q. 50c.	Oct. 1	Sept. 14
Devoe & Raynolds	"A"	Q. 60c.	Oct. 1	Sept. 21
Devoe & Raynolds	"A"	Ext. 20c.	Oct. 1	Sept. 21
Devoe & Raynolds	"B"	Q. 60c.	Oct. 1	Sept. 21
Devoe & Raynolds	"B"	Ext. 20c.	Oct. 1	Sept. 21
Devoe & Raynolds	Pfd.	Q. 1¾%	Oct. 1	Sept. 21
Empire Gas & Fuel	8 % Pfd.	M. 66⅔c.	Oct. 1	Sept. 15
Empire Gas & Fuel	7 % Pfd.	M. 58⅓c.	Oct. 1	Sept. 15
Empire Gas & Fuel	6½% Pfd.	M. 54⅙c.	Oct. 1	Sept. 15
Empire Gas & Fuel	6 % Pfd.	M. 50c.	Oct. 1	Sept. 15
General American Tank	Com.	Q. $1.00	Oct. 1	Sept. 15
General American Tank	Pfd.	Q. $1.75	Oct. 1	Sept. 15
Gulf Oil	Com.	Q. 37½c.	Oct. 1	Sept. 20
Hercules Powder	Com.	Q. 2%	Sept. 25	Sept. 15
Holly Oil	Com.	Q. 25c.	Sept. 30	Sept. 14
Honolulu Consolidated Oil	Com.	Q. 50c.	Sept. 15	Sept. 5
Honolulu Consolidated Oil	Com.	Ext. 25c.	Sept. 15	Sept. 5
Homestake Mining	Com.	M. 50c.	Sept. 25	Sept. 20
Humble Oil & Refining	Com.	Q. 30c.	Oct. 1	Sept. 11
Humble Oil & Refining	Com.	Ext. 20c.	Oct. 1	Sept. 11
Johns-Manville	Com.	Q. 75c.	Oct. 15	Oct. 1
Johns-Manville	Pfd.	Q. $1.75	Oct. 1	Sept. 17
King Royalty	Com.	Q. 2%	Oct. 1	Sept. 15
Lambert Company	Com.	Q. $1.25	Oct. 1	Sept. 17
Lambert Company	Com.	Ext. 50c.	Oct. 1	Sept. 17
Life Savers, Inc.	Com.	Q. 40c.	Oct. 1	Sept. 14
Lone Star Gas	Com.	Q. 50c.	Sept. 30	Sept. 19
Mountain Producers	Com.	Q. 65c.	Oct. 1	Sept. 15
Nevada Consolidated Copper	Com.	Q. 37½c.	Sept. 29	Sept. 14
Owens Bottle	Com.	Q. 75c.	Oct. 1	Sept. 15
Penick & Ford	Com.	Q. 1¾%	Oct. 1	Sept. 14
Pratt & Lambert	Com.	Q. 75c.	Oct. 1	.....
Richfield Oil	Pf. l.	Q. 43¾c.	Nov. 1	Oct. 5
Salt Creek Consolidated Oil	Com.	Q. 20c.	Oct. 1	Sept. 15
Sherwin-Williams of Canada	Com.	Q. $1.50	Sept. 30	Sept. 15
Sherwin-Williams of Canada	Pfd.	Q. $1.75	Sept. 30	Sept. 15
Southwestern Gas & Electric	Pfd.	Q. $1.75	Oct. 1	Sept. 15
Southwestern Gas & Electric	Pfd.	Q. $1.50	Oct. 1	Sept. 15
Standard Oil Co. of Kentucky	Com.	Q. $1.00	Sept. 29	Sept. 15
Tide Water Associated Oil	Pfd.	Q. $1.50	Oct. 1	Sept. 17
Tide Water Oil	Com.	Q. 20c.	Sept. 29	Sept. 17
Utah Copper	Com.	Q. $2.00	Sept. 29	Sept. 14
Wesson Oil & Snowdrift	Com.	Q. $1.00	Oct. 1	Sept. 17
West Coast Oil	Pfd.	Q. $1.50	Oct. 5	Sept. 25
West Coast Oil	Pfd.	Ext. $3.00	Oct. 5	Sept. 25

Financial Notes

GLIDDEN COMPANY stockholders of record September 7 will receive the right to subscribe to 100,000 additional shares voted by the directors on August 29. The directors proposed an increase in common from 400,000 to 500,000 shares, the additional shares to be offered at $23 a share in the ratio of one new share for every four held. It was announced that payment must be made by September 28, in order to enable the company to retire on October 1 the issue of $2,800,000 first mortgage 6 percent bonds, for retirement of which the stock issue was voted.

MEXICAN SEABOARD OIL COMPANY reports for the quarter ended June 30 consolidated net loss of $100,123 after interest and drilling expenses, but before depletion, as compared with loss of $427,524 in the previous quarter and loss of $760,027 in the June quarter last year. For the first six months of 1928 loss was $527,377, as compared with loss of $1,277,935 in the corresponding period last year.

SKELLY OIL COMPANY reports for July net earnings of $654,756, equal to 60 cents a share earned on the outstanding stock, or $200,000 more than was earned in the entire first half of the year. Net earnings for the first quarter of 1928 were $456,344. The earnings in July were the largest for any month since September, 1926. Refined stocks are smaller now than at any time since 1926, and the price of all petroleum products is holding firm.

JOHNS-MANVILLE CORPORATION stockholders have approved an increase in the authorized common shares from 750,000 to 1,000,000. It is understood that the proceeds from the sale of new stock will be used to acquire other businesses, extending the present organization and provide a distribution fund for employees. Part of the additional stock, it is reported, will be offered to shareholders at about $100 a share.

AMERICAN NATURAL GAS CORPORATION consolidated statement for the six months ended June 30, 1928, shows gross revenues of $6,162,441 and after ordinary taxes of $2,902,491. After interest, depreciation, depletion, preferred dividends of subsidiary companies, preferred dividends, etc., the balance was $781,576 available for amortization, Federal taxes and common stock.

VIRGINIA-CAROLINA CHEMICAL CORPORATION reports for the year ended June 30, 1928, net profits of $2,510,702 after expenses, depreciation, depletion and provision for doubtful accounts, equivalent after deduction of the 7 percent prior preference dividends and allowing for dividend requirements on the 6 percent cumulative preferred stock, to 68 cents a share on the outstanding 468,700 shares of no par common stock. The company recently has paid up $3 in arrears on the 6 percent preferred stock.

LIBBEY-OWENS SHEET GLASS COMPANY will reorganize and then dissolve the United States Sheet and Window Glass Company, a subsidiary, after a purchase of its property assets. A meeting of stockholders of the latter company will be held September 19 at Toledo, at which at least 85 percent of the stock must be voted in approval of the proposal.

MEMPHIS NATURAL GAS COMPANY as an initial step in financing a $10,000,000 pipe line has sold an issue of $6,300,000 first mortgage bonds to a banking group headed by P. W. Chapman & Co., Inc., who plan to offer the issue shortly. The company's entire output of gas has been sold, under contracts extending beyond the life of these bonds, to the Memphis Power & Light Company, the Mississippi Power & Light Company, and the Arkansas Power & Light Company. The issue will carry stock purchase warrants.

AMERICAN COMMERCIAL ALCOHOL CORPORATION reports for the quarter ended July 31 net income of $243,296 after all charges, including Federal taxes, equivalent after preferred dividends to $2.65 a share earned on 77,000 shares of common.

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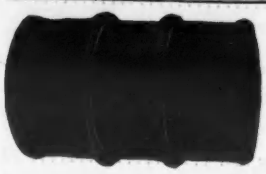

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